THE LANCET.

LECTURES

ON THE

ANATOMY, PHYSIOLOGY, AND DISEASES OF THE EYE.

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Lecture XXX.

Gentlemen,

There are some states of the eye in which vision is destroyed or impaired, in consequence of contraction or closure of the pupil, or of such changes in the pupil, combined with opacity of the crystalline capsule, or of the cornea, in which there is a possibility of relief, by making a new aperture for the passage of light through the iris; and the different proceedings adopted for making this aperture are called the

Operations for artificial Pupil.

There are various conditions of the organ to which the operation for artificial pupil is applicable; as, for example, a greatly contracted or closed state of the pupil, in which you generally find, in addition, adhesion of the iris to the capsule, while the imperfect aperture, that may be left, is usually filled by an opaque membranous substance, which is either an opaque capsule, or an adventitious membrane, formed by the organization of lymph effused during inflammation of the iris. Such a state of the pupil may be the result of the different operations for cataract, when they produce inflammation of the iris. You may have a closed pupil remaining after iritis, when it occurs from internal causes, as the arthritic, idiopathic and syphilitic kinds, or you may have the pupil merely contracted. In the cases now enumerated, the cornea and anterior chamber are usually natural.

Prolapsus iridis may produce such contraction or alteration of the pupil as to injure vision very seriously. If a large portion of the iris should have been protruded, the fibres of the iris must be tightly stretched from the ciliary margin to the situation of their adhesion to the cornea. The prolapsus of the iris, producing more or less alteration in the figure, or complete closure of the pupil, may occur from wounds or ulcers of the cornea.

Lastly, you may have the changes already described in the pupil, combined with opacity of the cornea. The importance of this opacity will depend upon its situation: for if the lencoma should be placed opposite to the contracted pupil and if, in addition to this, there be adhesion between the pupil and the capsule of the lens, or between the iris and cornea forming synechia anterior, no benefit can be derived from the application of belladonna; and consequently, under these circumstances, a small opacity of the cornea would be sufficient to destroy vision.

These are generally the conditions of the organ, which render the operation for artificial pupil necessary; you may have the pupil simply contracted or closed, or these changes may be combined with opacity of the capsule, with an adventitious membrane in the pupil, with synechia, anterior or posterior, with displacement of the pupil, or opacity of the cornea. All these conditions of the organ are the consequences of severe inflammation, either external or internal. It must also be recollected that this serious inflammation may not have confined itself to the production of the consequences just mentioned, but that it will probably have extended, in many instances, to the nervous structure of the eye, or to other parts of the organ. Hence it is necessary to ascertain correctly, whether the loss of vision is produced by the changes of the pupil only, before you think of at-

tempting the operation for an artificial pupil.

A careful inquiry into the state of the organ altogether must be the first step in such cases. In the first place, observe the colour of the iris; for change of its colour is one effect of inflammation, and you may detect this change by comparing the affected with the sound eye. If the inner circle only be altered, it is of no consequence; but if the change of colour extend through the whole iris, it is unfavourable. There are changes of texture also, which, in addition to the adhesions of the pupillary margin will show you decidedly whether the whole or a part only of the iris has undergone inflammation; if you find that these appearances are confined to the lesser or pupillary circle, the greater or ciliary part remaining free, that circumstance would not be unfavourable; but if the effects of inflammation should be apparent toward the ciliary or greater circumference, then you may infer that the ciliary body and the other textures in connexion with it have suffered also. Observe whether the iris preserves its smooth and level appearance; or whether it bulges forward, and is elevated into little tubercular projections. If it form a convexity in the anterior chamber, and if its surface be puckered and irregular, then it has undergone such serious changes in texture, that the operation is impracticable; and you may be satisfied that the retina has undergone such changes as would render the opening, even if one could be made, totally useless. Observe also, whether the globe of the eye has its natural size and consistence. If it be enlarged by dropsy, or if it be unnaturally flaccid; if it should have become soft, from the commencement of atrophy, you may be certain that the operation, if performed, would be unsuccessful. Observe whether the eye has its natural appearance around the ciliary body; when the globe has been long diseased, when the internal parts have been long the seat of inflammation, it often happens that there is a thinning of this part, and sometimes a little bluish projection, which has been called staphyloma scleroticæ: that is a change very unfavourable for the performance of the operation. You must also look at the external vessels of the globe, to see whether they are of their natural size; if they be enlarged and varicose, that would indicate an unhealthy state of the internal parts of the eye. But you must more particularly examine whether the retina possesses a clearly marked sensibility to light; for of course without that, the operation must be altogether fruitless. It might occur to you, that if the pupil be contracted, and the capsule be opaque, that no light would pass through to affect the retina, and that consequently we could have no direct evidence on the question of its sensibility. However, the opacity of these parts is partial, and not sufficient to prevent the transmission of light in sufficient quantity for this purpose. If the pupil be closed, and the capsule and lens opaque, the patient will readily distinguish light and darkness, if the retina be unaffected; he will even do so, if an opaque cornea be added to the other changes. If the patient therefore cannot make that distinction, we may conclude that the eye is amaurotic, and the operation consequently hopeless. In many of the conditions of the eye, requiring the operation for artificial pupil, a much greater degree of vision exists.

In mentioning that all these points should be matters of inquiry previously to operation, I mean that attention to these particulars is necessary in order that you may inform the patient before hand what the prospect of success is, in order that you may be able to tell him whether the operation is likely to be successful or otherwise. It is the duty of the surgeon to put the patient in possession, as accurately as he can, of the exact state of the case. The surgeon will recommend the operation only where he thinks it will be advantageous; there are, however, conditions of the eye which are unfavourable without being hopeless, and in which patients, after being apprised that there is very little hope of improving sight, determine to try the experiment of a doubtful operation, rather than submit, without an effort, to permanent blindness.

Prognosis.—The prognosis of the operation is favourable in proportion as the loss of vision is simply dependent on the changes in the state of the pupil, and as the texture of the iris itself is sound. The best cases, therefore, are those of pupils contracted or closed from prolapsus of the iris through wound or ulcer of the cornea; here the globe may be considered perfectly healthy. Closure of the pupil after operation, is also a favourable case. We may class also the instances of external inflammation with prolapsus; when the inflammation has subsided, the organ is left in a healthy state, and the operation may be performed with every prospect of success. The prospect of success is less, when the contracted or closed pupil has been produced by internal inflammation. Iritis, and other internal inflammations, do not come on in a perfectly healthy constitution; and the iris-

ation, which the eye suffers from the operation, will be likely, in that unfavourable condition of the general health, to produce a similar attack to the original one; it will produce the same sort of inflammation and effusion of lymph from the iris which was before the principal cause of the mischief. The prognosis is very bad when the iris is changed in colour and texture; when the globe is altered in its state, whether enlarged or shrunk; when the vessels of the globe are varicose; and when the perception of light does not exist, or in a very limited degree.

Generally speaking, the necessity for the operation arises out of disorders originally inflammatory, which, in many instances, leave the eye more susceptible of subsequent attacks. Hence the patient should be carefully prepared for the operation, and closely watched after it, with a view to prevent the occurrence of inflammation. On both these points I refer you to what I have said in speaking of the operation for cataract.

Operations.—In the operations for artificial pupil, our object is to make a new opening in the iris, of such a size that it may remain permanently open, and thus admit light into the interior of the eye; unfortunately, in most instances, this new opening has a tendency to close. It is made in a part where there is no natural aperture, and as attempts are always made to repair the consequences of injury, we may expect that the artificial opening in the iris will become smaller after the operation. For this reason it may be deemed a general rule to make the opening as large as possible. As there are several different states of the eye, in which an artificial pupil is necessary, so there has been a great variety of operations proposed for the accomplishment of this object. The instruments may be much varied, and many persons attach importance to trifling matters of that kind; so that many changes and modifications have been proposed from time to time. If I were to enumerate every modification of the operation for artificial pupil, the list would be very long indeed. In the work of Mr. Guthrie, entitled a "Treatise on the formation of Artificial Pupil," mention is made of the various operative proceedings which had been prepared up to the time of his work; I think that he has described between forty and fifty methods. I do not mean to enter into all these particulars; all I can do is to mention the general principles applicable to such cases, and it must rest with you to apply the means according to the circumstances of particular patients. If you wish for more detailed information on the subject you must refer to Mr. Guthrie's, and other books. The three most general operations are the following:—

Koredialysis.

The first mode in which the operation was performed consisted in separating the iris from the ciliary body, which has been called by the Germans *koredialysis*. The first hint of this operation was derived from cases in which the iris had been partially separated from the ciliary body by accident: thus a permanent aperture was produced in some instances, answering the purposes of a pupil very well. The first pupil of this kind was accidentally made by a blow from the lash of a whip. Scarpa proposed this mode of proceeding in such cases as required an artificial pupil, and for this purpose he employed a curved needle; he introduced it through the cornea, carried it across the front of the iris, in which he made an opening, by bringing the point of the needle through the iris, and tearing a part of it away from the ciliary border. This mode of procedure was recommended by Scarpa, and at the same time by Schmidt, so that the merit of the invention may be ascribed to both. Schmidt, however, introduced his curved needle behind the iris, and pierced the latter part with it from behind forwards. It will be found that the separation of the iris in this way is attended with a loss of blood; for, although the iris when simply cut, does not bleed, yet, when the trunks of its vessels are torn or lacerated, blood is effused from it into the anterior chamber. Scarpa's needle may be introduced either through the cornea, or behind the iris, and in that case the point would be carried from behind forwards, through the iris into the anterior chamber, and in either case it must be so used as to draw toward the lower part of the eye, and toward the point at which the needle is introduced, a portion of the iris; the consequence of which is, that a part of the iris becomes detached from the ciliary body. There is a needle employed by Beer for this purpose; it is rather broader than Scarpa's. If the circumstances admitted of it, the best way would be to introduce the needle through the cornea, but there will be no great difficulty in doing it through the sclerotic behind the iris. Now the inconvience of this method is, that the iris is apt to resume its position again; the pupil, which might have been of considerable size at the time of the operation, will become much smaller, and, as Scarpa

acknowledges in his last work, *filiform*, that is, reduced almost to the size of a thread. Hence this first mode of making an artificial pupil, the operation of koredialysis, is now nearly abandoned.

Koretomia.

The next mode is called the operation by incision, and by the Germans *koretomia*. The object of this method, which is supposed to have been practised by Cheselden, and was recommended by Wenzel, is to make a cut through the iris, and through the opaque capsule, if there be one, at the same time, trusting to the retraction of its fibres for converting a simple incision into an aperture sufficiently ample for sight. This way of operating was altered and improved by Sir William Adams, who described his mode of proceeding in a work which he published on diseases of the eye. He employed a very small scalpel, called an iris scalpel. The instrument in this case is to be introduced into the eye, as you would introduce the needle for the operation of depression behind the iris: having done this, you bring the point of the instrument through the iris on the temporal side of the eye into the anterior chamber, and you then carry the knife gradually across the iris. The object in this operation is to make a straight division through the iris, as long as you can. Since this delicate structure readily yields to the pressure of the instruments, you must bear lightly against it, and draw the knife across repeatedly, so as to divide the fibres by a sawing motion. The most favourable state of the eye for this operation, is when the iris has its natural colour, and when its fibres are quite tense. In this work of Sir William Adams, we find an engraving of the knife; it is so narrow, that it differs very little from the common cataract needle; these iris scalpels are now made still narrower, not exceeding the breadth of the needle. You introduce the instrument about two lines behind the cornea, just as you would the needle for depression, and instead of carrying it toward the centre of the eye, you carry the point through the iris on the temporal side of the eye, and then draw it across, with the acting edge turned toward the iris, from one side to the other, and then withdraw it. That is Sir William Adams's operation for artificial pupil.

A French surgeon, or rather a native of Geneva, M. Mannoir, divides the iris with a very small pair of scissars, which are made for this express purpose. It is necessary to make an opening in the cornea with a cataract knife, just as you would do for extraction, only much smaller. These scissars have one blunt and one sharp point, so that you introduce the sharp point through the iris, and carry the blade blunt at the extremity before the iris, and thus divide as much of it as may be necessary. Sometimes the pupil is made by two little cuts through the iris, joining at an acute angle. The little flap thus made retracts, and thus leaves a small triangular opening. This mode of proceeding may be advantageously employed when the cornea is clear, the anterior chamber undiminished, and the fibres of the iris tense. These are the modes of making an artificial pupil by incision or koretomia. It is necessary for the performance of each of these, that the cornea should be transparent, and that the anterior chamber should be of its natural dimensions; for if the anterior chamber be small, or if the adhesions of the iris to the cornea be considerable, these modes of operating cannot be so easily adopted.

Korectomia.

The third mode of making an artificial pupil, is by the operation of excision, called by the Germans *korectomia*, in which the object is to cut out a portion of the iris, and thus to leave an opening for the transmission of light. This may be accomplished also in different ways; if we make an opening in the cornea, and a prolapsus of the iris do not take place of itself, you may make a little pressure on the opposite side of the eye, and when you see the iris projecting through the opening, you may seize it with a forceps, and cut off a portion. This was the way in which Mr. Gibson first proposed the operation to be performed. When you have made the opening in the cornea, and the iris dose not prolapse of itself, or make its appearance on a little pressure of the globe, you may introduce a small hook through the opening, draw out a portion of the iris, and cut it off. There is a single hook recommended for this purpose; but the inconvenience attending the use of that instrument is, that it will often tear through the iris without bringing it out at the opening; and to remedy this, a German operator caused a double hook to be made which would allow of being pressed together, and introduced through the opening in the cornea as a single instrument. This is the hook, (showing it to the class,) and this is the hook of Mr. Gibson; this is the scissars Mr. Gibson employed. You may succeed with various instruments in performing this operation, and sometimes better with one than another, and in the use of them you must

be guided by the peculiar circumstances of the case. The general mode of operating in cases of excision is this: you open the cornea with a cataract knife, you get a portion of the iris to prolapse through the opening, and cut it off with a scissars; and if it does not prolapse you hook out a portion and cut it off. You may operate in this way with great advantage when a part of the edge of the pupil is free, when the whole of the pupil is not adhesive, and then you get the loose edge of the iris through the opening, and enlarge the natural pupil very considerably.

The conditions of the eye, requiring the operation for artificial pupil, are so diversified, that it would be almost impossible to lay down any precise rules for the use of either of these modes. When you well understand the nature of the methods, you must adopt that which may seem best suited to each case. The combinations presented by these cases are so numerous, that each instance almost exhibits something peculiar, and requires some modification in the operation. The situation of the new pupil is a point which requires some attention. This is often not a matter of choice, but of necessity; as the pupil must be made opposite the transparent part of the cornea; but if you have a choice, there are certain parts of the eye more advantageous for the purpose than others. The best situation is on a level with the original pupil, either on the nasal or temporal side. The next best situation is just below the natural pupil, and the least so, is above the pupil, between it and the ciliary border of the iris.

An important point to be considered in the operation, is whether the lens be present or not. Of course it is better that the lens should not be present, but if you find the lens opaque, then you have the operation for cataract to perform in addition to that for artificial pupil. Moreover, the means you take for the formation of the pupil will almost invariably wound the capsule or the lens, and make it opaque. If possible, it is best to take such a course as will enable you to remove the opaque lens at the time you form the pupil. If you do not do this, it will be necessary to perform the operation of depression, or to break up the lens, and cause its absorption subsequently. In doing this, you must be guided by the appearance of the lens, by the age of the patient, and so on; you must act in particular cases according to circumstances.

(Mr. L. then showed the various modes of making the artificial pupil on the eyes of sheep.)

LECTURES

ON THE

THEORY AND PRACTICE OF PHYSIC,

By DR. CLUTTERBUCK.

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Lecture XLI.

On the Diseases of the Urinary Organs.

Gentlemen,

The urinary organs consist of the kidneys and their excretory ducts—the ureters; and the urinary bladder, and its excretory duct—the urethra. To these we might add, as appendages to the kidneys, the renal capsules. Before considering the diseases of these parts, I shall, as usual, premise a few physiological remarks, as serving to render the pathology more easily understood.

Of the Kidneys.—The kidneys are two glandular bodies situated at the back part of the abdomen, behind the peritoneum, one on each side of the spine, opposite to the two last dorsal and two first lumbar vertebræ. The right kidney is situated immediately below the great lobe of the liver, which causes it to be placed rather lower than the left. Above the left kidney, is the spleen. Both kidneys are almost covered by the incurvature of the inferior, false, or floating ribs.

The blood vessels of the organs are very large. The arteries, called the *renal* or *emulgent* arteries, come directly from the aorta. Between the renal arteries and veins there appears to be a ready communication; for we may easily inject the latter set of vessels from the former, even by a coarse injection.

The *sensibility* of the kidneys is not great, the nerves supplied to them being very small; these come from the *great sympathetic*, principally.

The *Ureters* are the channels through which the urine is conveyed into the bladder; they arise from the notch of the kidneys, and cross the *psoæ* muscles, in order to get to the bladder. Just before they arrive at the bladder, the ureters cross the outer side of the excretory ducts (*vasa deferentia*) of the testicles; a fact worth remembering; for it has occasionally happened that a calculus in passing along the ureter, has produced inflammation of the testicle, and which is easily

explained by recollecting the relative situation of the ureters and *vasa deferentia*. The ureters perforate the bladder at its lower and back part, in an oblique manner, the duct running for some little distance between the coats; so that the membrane lining the bladder, acts as a valve upon the mouth of the ureter.

The office of the kidneys is to form the urine, (not merely to separate it;) and the ureters convey it thus formed into the bladder, where it is retained for a certain time, and then discharged through the urethra, which is the single outlet for this excrementitious fluid. In consequence of the rapidity with which fluids are conveyed from the stomach to the bladder, it has been supposed by some that there is some nearer channel for it to pass, than through the general circulation; and the spleen has been supposed to assist in this process. It is almost needless for me to tell you, Gentlemen, that there is no proof for any such opinion. The large size of the renal vessels, sufficiently accounts for the quickness with which the urine is secreted.

The kidneys, like all other vascular parts, are subject to inflammation and its consequences: the term *nephritis* is applied to it. We might, *a priori*, suppose, that from the great vascularity of these glands they would be peculiarly prone to inflammation: such, however, does not appear to be the case; for *nephritis* is less frequent than many other inflammations. The kidneys also are liable to have their functions altered, in consequence of disease in remote parts of the body: thus in inflammation of any organ, where there is much *pyrexia*, the secretion of the kidneys is almost always altered, both in quantity and quality. Lastly, the secretion of the kidneys may be altered, not apparently from any inflammation in these organs, nor from diseases in other parts, but from some unknown change in the action of their vessels, in consequence of which the urine is disposed to form concretions, giving rise to calculi of various kinds; for an elaborate account of which, we are more particularly indebted to Dr. Prout.

Of Nephritis, or Inflammation of the Kidneys.

Inflammation of the kidneys is characterised by the usual symptoms of inflammation: namely; more or less of pain or uneasiness in the part, disordered function, and, in some cases, *pyrexia*. There are also some peculiar symptoms which generally attend, and by which we are enabled to distinguish this disease from others, with which it is liable to be confounded.

The pain of nephritis, though sometimes acute, is more commonly dull, and often of a throbbing kind. Frequently it extends down the ureter, occasioning the patient to bend his body forward. By this symptom only, we may in many cases be able to distinguish between *nephritis* and inflammation of the lumbar muscles, (*lumbago*); for in the latter disease, the patient cannot stoop, on account of the pain it produces. On some occasions, the patient complains only of uneasiness in the region of the kidneys. The proximity of the liver and right kidney to each other should be borne in mind; for in some instances, an affection of the liver has been mistaken for that of the kidney.

When inflammation affects the kidney, the urine may be altered in quantity or quality, or in both respects at once. In acute inflammation, the secretion may be totally put a stop to; or if not wholly stopped it may be much diminished, and the urine which is passed in this case is, in general, very high coloured, and sometimes even tinged with blood. The inflammation may affect one kidney, without affecting the other—so that the secretion of the one may be considerably diminished, or suppressed, without the other being materially affected. On this account, there may be discharged a sufficient quantity of urine, although *nephritis* exists, the urine being secreted by the healthy kidney. In slight or chronic inflammation of these organs, the secretion may be much increased in quantity, and altered in quality at the same time; becoming very pale and watery, or otherwise changed from the natural state.

In addition to the symptoms which I have now mentioned, there are some others which may be termed peculiar; and which assist us materially in our diagnosis. Of these, nausea and vomiting may be mentioned. This can only be referred to some unintelligible sympathy existing between the stomach and kidneys; but it is a symptom upon which great dependance may be placed in distinguishing disease of the urinary organs from others. Numbness of the thigh, and retraction of the testicle, are symptoms that in most cases serve to distinguish *nephritis* from other diseases. These are generally observed to accompany calculi in the pelvis of the kidney. In very violent cases of *nephritis*, when the secretion of urine is totally put a stop to, the brain becomes affected, producing delirium and ultimately stupor.

Terminations.—*Nephritis*, like other inflammations, may terminate in various ways; frequently in the formation of pus. Dr. Baillie has remarked that no gland of the body is so prone to suppuration, as the kidney. When matter is formed, it may be discharged into the pelvis of the kidney, in which case it will be evacuated with the urine; or it may burst into the cavity of the abdomen, an occurrence, however, which is very rare, and which would probably prove fatal; or lastly,—the matter may be discharged externally by an abscess in the loins, when a discharge of urine would probably accompany the purulent matter. Such an opening would be likely to become fistulous.

Causes.—Inflammation of the kidney is produced by all the ordinary causes of inflammation: such as exposure to cold, injuries of the part, long journeys on horseback, the use of acrid diuretics, as cantharides and the different terebinthinate substances, and also acids and alkalies used to excess. The present indulgence in the use of soda water as a beverage, is very likely to stimulate the kidneys injuriously. The presence of a calculus in the pelvis of the kidney is another existing cause, producing the disease in a chronic form that is generally incurable. Lastly, nephritis may take place in the way of *metastasis*, which is a frequent occurrence in persons labouring under what is called *gout*.

The *prognosis* of nephritis will, as in other cases, depend upon the degree and duration of the disease, and also upon the cause inducing it. In recent and not very violent cases, and when produced by temporary causes, the *prognosis* is favourable. When excited by the constant presence of a calculus lodged in the pelvis of the kidney, and which can neither be dislodged nor dissolved, the inflammation will be kept up, though liable to great fluctuations in point of violence. A very violent inflammation of the kidney is always dangerous.

Treatment.—The treatment of this inflammation is much the same, as for inflammation in any other part of the body. *Bloodletting*, according to the age and strength of the patient and violence of the disease, must of course be resorted to. In the choice of purgatives, the saline ones are rather objectionable, on account of their being carried to the kidneys, and in all probability stimulating them. *Counter irritation* in the neighbourhood of the part may also be employed; as by mustard poultice, or the application of some strong liniment. The cantharides are objectionable, on account of the specific property belonging to them of irritating both the kidneys and bladder, so as to produce strangury and bloody urine. Warm *fomentations*, and the *warm bath*, are also parts of the treatment, to be occasionally resorted to. The administration of *alkalies* is frequently of advantage, by altering the urinary secretion, so as to diminish the natural acidity of the urine, by which it is rendered less irritating; but it is questionable, how far a continued use of them may be proper. *Opium* also is of service, in relieving pain. When the inflammation has become of a chronic kind, accompanied with a purulent discharge, the *uva ursi* has been strongly recommended. It is a remedy, however, upon which no great reliance can be placed. It has been often given to the patients of this Dispensary, in doses of half an ounce, without the least advantage, and without any sensible effect. Mercury, perhaps, may in some form of chronic *nephritis*, be of service; but as the disease is usually accompanied with hectic symptoms, we cannot often employ it.

The next disease of the kidney to which I would direct your attention, is

Diabetes.

The term diabetes was originally applied to a disease characterized by an immoderate flow of urine, without reference to the quality of the fluid passed. Of late, however, it has been applied to those cases in which the urine, at the same time that it is much increased in quantity, is sweetish to the taste, and in fact contains a large portion of saccharine matter. Dr. Cullen makes two species of diabetes: the *diabetes serosus*, or *insipidus*, and the *diabetes mellitus*. Dr. Prout, however, recommends the restriction of the term to the latter form of the disease.

Symptoms.—The symptoms indicating diabetes are, an immoderate flow of urine, often exceeding in weight all the solids and fluids taken in; and which continues in many cases for months, varying a good deal from time to time, according to the quality of the food taken, and the state of the general health. If a diet exclusively of an animal kind be adopted, the urine lessens in quantity, and resumes its natural character; but this change lasts only as long as the animal diet is pursued. The other symptoms remain unchanged; so that no real or lasting relief is thus obtained. The urine discharged is pale and whey-like in appearance, and of a peculiar odour, that has been com-

pared with that of violets. When evaporated, it leaves a residuum, having the consistence and somewhat the colour of treacle. The breath of the patient exhales an odour like the urine, and in many instances I have been enabled to detect the disease by this sign. Indeed I believe diabetes is often overlooked from want of attention to these and the other characters of the disease. In some cases, the urine has all the characters of diabetic urine, without being increased in quantity. Diabetic urine does not putrify like common urine, but readily undergoes the vinous and acetous fermentations.

The patient almost always complains of more or less uneasiness in the region of the kidneys; sometimes there is a dull aching pain felt. The appetite is often ravenous, accompanied with immoderate thirst. The disorder of constitution is usually considerable, the skin being hot and of a remarkably parched feel; the pulse quick and small; the tongue dry, and sometimes covered with a white fur; at other times it is of a glossy redness. The body gradually wastes, the strength declines, and if the disease be not stopped, anasarca generally succeeds. In many cases there is considerable irritation in the prepuce, with phimosis.

On examining the bodies of patients who have died of this disease, the kidneys are found in an unnatural state; generally much enlarged, and more vascular than usual. Occasionally they have been found in a flabby condition, and of a pale ash colour.

Causes.—The causes of diabetes are seldom obvious, and in general cannot be ascertained. In some instances it has appeared to be produced by the use of spirituous liquors, or strong diuretics; but in most cases nothing of this sort can be discovered.

Prognosis.—The prognosis of diabetes is very unfavourable. We seldom have opportunities of seeing the disease early, and indeed when we do, we have but little control over it; I have seen in a very few instances patients recover; but upon the whole, it generally proves fatal, though it is often protracted for some years.

The *Theory* of diabetes is very obscure. Neither the *seat* nor the *nature* of the disease is sufficiently determined. It has often been referred to relaxation of the kidneys, and general debility. Dr. Cullen and some other physicians, consider it as primarily seated in the assimilatory organs. Dr. Darwin, who imagined that the lymphatics of the stomach have a direct communication with those of the bladder, thought the disease consisted in a retrograde motion of this set of vessels. Of late, the disease has been attributed to the mucous membrane of the alimentary canal. None of these opinions are satisfactory, nor do they assist us in the cure.

The chief grounds for supposing diabetes to be dependant upon some disorder of the digestive process, are the voracious appetite, and the immediate change induced on the urine by abstaining from vegetable food.

A voracious appetite, however, is not constantly present in diabetes. I have at this time a gentleman under my care, whose appetite is rather deficient, and whose greatest complaint is of the hot and parched state of the mouth and fauces, and of insatiable thirst. The strong desire for food that is observed in many cases, seems to be merely an effort of nature to supply the excessive waste of the body that is taking place; similar to what occurs in a lumbar abscess, where for a time, provided the general health is not disturbed, the patient has a great craving for food, the supply of which enables the constitution to bear up against the unnatural discharge of purulent matter that is going on. If diabetes were nothing more than a disorder in the digestive process, the change induced by the use of animal food might be expected to be permanent; and that the other symptoms would be relieved as well as the increased flow of urine: which is not the case.

That the kidneys are the primary seat of the disease, appears much more probable. It is incontrovertible, that the state of the secretions, both as to quantity and quality, depend chiefly, if not exclusively upon the state of action in the secreting organ. The kidneys are not mere strainers, for separating the urine from the blood. The urine is not contained in the blood, as a constituent part of this fluid, but a new formation, produced by the peculiar action of the renal vessels, and varying both in quality and in quantity, with the action that produces it. Whatever prior state of disease be supposed, therefore, the kidneys must still be referred to, in order to account for the increased quantity, as well as the altered quality of the secretion; and as we find them secreting at different times urine of very various quality, there is no difficulty, *a priori*, in supposing their action to be so modified by disease, as to enable them to form urine of a saccharine nature. If the saccharine matter were formed in the digestive organs, we might expect to find some traces of it

either in the contents of the stomach, or in the blood itself; but this is not pretended to be the case. It might be expected also, that the direct use of saccharine substances in any considerable quantity, would aggravate the disease, or even produce an artificial kind of diabetes at any time. But I have repeatedly and purposely given sugar freely in this disease, without its appearing to have any effect on the urine: and when sugar has been administered very largely, as was formerly done for certain purposes, it was never supposed to have produced diabetes.

As therefore the leading symptoms of diabetes, the increased and altered state of the urine, can be readily explained by referring it to a disordered state of action in the kidneys, it seems unnecessary to go farther for the *seat* of the disease. The local nature of the affection is further proved, by the pain or uneasiness so commonly felt in the region of the kidneys, and by the altered appearance of those organs observed after death.

Admitting then that the kidneys are the primary *seat* of the disease, it is desirable to ascertain the *nature* of the affection, or what is called the *proximate cause*. This is a point of greater difficulty, and I apprehend we cannot, at present, say precisely what this is. Looking, however, at the febrile state of the system generally,—the large quantity of urine secreted,—the enlargement and increased vascularity of the kidneys, as observed upon dissection; and the appearance of the blood drawn from the veins, which, as far as I have observed, is always buffy and contracted; there seems much reason to connect the disease with inflammation, though probably of a modified nature. If this could be established, it must have an important influence in directing our practice.

Treatment.—You will easily suppose, Gentlemen, that the treatment of a disease, the pathology of which is so obscure as that of diabetes, cannot but be uncertain and unsatisfactory; as indeed the result too clearly proves. A great variety of treatment has been pursued, according to the notions entertained with regard to the nature of the disease. Those who have considered it as founded in general debility, or in relaxation of the kidneys, have administered *tonics* and *astringents*, such as bark, chalybeates, alum-whey, and the like; but with very little advantage. Turpentine, and cantharides, have also been tried as stimulants, but not found successful. Some have kept the patient wholly upon animal food; and for a time, the urine has resumed its natural character; but this advantage, partial as it is, is only temporary, as I before observed. This plan of treatment, besides, is found so very repugnant to the patient's feelings, that few have the resolution to continue it for any length of time. The *hydro-sulphuret of ammonia* was at one time in great repute, but is now getting into disuse again, no doubt from having been found inefficacious.

The practice which appears to me the most rational, according to the view I have taken of the nature of the disease, and which is supported also by the experience I have had on the subject, is a mild *antiphlogistic* treatment. The disease being chronic, small occasional bleedings only are admissible: these I have almost always found advantageous, by lessening local pain and febrile action; and the urine has been diminished in quantity under their use. *Mild purgatives* are to be employed from time to time, avoiding those of a saline description. *Counter-irritation* by the *tartarized antimony* or other means, should be made to the skin of the back: I need not say, that *cantharides* are objectionable for the purpose. The digitalis which, as a *diuretic*, might seem to be improper in a case where the flow of urine is already so great, I have found upon trial, so far from increasing it, that it has the contrary effect. This it is not difficult to understand, upon the supposed inflammatory nature of the disease.

The *diet* should correspond with the medical treatment now suggested. I think, from what I have been able to observe, that the patient may very well in general be left to follow his inclinations in this respect. I have at present under my care, an old gentleman labouring under diabetes, who, from a dislike to animal food, confines himself almost wholly to a vegetable diet: the symptoms in his case were extremely mild, so that the disease was for a considerable time overlooked, the large discharge of urine being considered by him as merely the result of the large quantity of drink his incessant thirst urged him to take: thus mistaking the effect for the cause. The disease altogether has been much mitigated by the plan of treatment I have just described.

Ischuria Renalis.—By this term is meant a total suppression of urine, from want of secretion by the kidneys. When this has continued for some days, the brain becomes affected, delirium taking place, and the disease soon proves fatal.

The suppression is most frequently caused by violent inflammation of the kidneys, which will be discovered by the usual symptoms. It may arise also from a paralytic affection of those organs, when, of course, the signs of *nephritis* will be absent. In the former case, the proper treatment is sufficiently obvious, being merely that of *nephritis*, of which the suppression is only a symptom. In the case of paralysis (if such should occur,) the first cause of the palsy being looked to and properly treated, stimulant diuretics might be employed; such as the turpentines and cantharides; but with proper caution, for fear of exciting inflammation, either in the kidneys or bladder; for a paralyzed part is still liable to inflammation.

Of Renal Calculi.

The kidneys are much disposed to the formation of calculi, which are lodged in the pelves of these glands. Their presence irritates, and ultimately inflames the kidneys, producing all the symptoms of *nephritis* in a mild or chronic form. The pain in the kidney is constant, though variable, and extends along the course of the ureter. The testicle is often numbed and retracted; and there is, frequently, numbness down the anterior part of the thigh. The urine is in general scanty and high coloured, often depositing a large quantity of viscid mucus upon standing; sometimes it is puriform or bloody, particularly after any great exertion. There is frequent nausea, with other disturbance of the functions of the stomach.

These cases generally terminate fatally, but they may continue for several years. Instances are upon record in which the calculus has been discharged externally by abscess in the loins. If it be small it often passes into the ureter, and thence slowly into the bladder, the shifting of the pain denoting its course. During its passage, the pain is much increased by paroxyms; as if the ureter were of a muscular structure and the presence of a calculus caused it to act spasmodically. This I believe to be actually the case, although the muscularity of these passages is denied. As the ureter passes over the *psoæ* muscles, we generally find that patients afflicted with this disease stoop forward in order to relax these muscles, and thereby to remove the pressure which might otherwise be made on the ureter. In some cases, the passage of the stone along the ureter produces *hernia humoralis*. I have already explained this to you. It arises from the ureter crossing the excretory duct of the testicle, and the calculus thereby irritating it; which irritation is conveyed to the testicle, inducing the disease in question.

Treatment.—The treatment of these cases is very unsuccessful, because we have little if any power of dissolving the calculi. If we had the calculi out of the body, we could easily effect their solution; but those chemical agents that are capable of doing this, undergo decomposition, or enter into new combinations, in their passage to the kidneys; and thus we fail in our object. In the generality of cases, renal calculi are composed of *uric* or *lithic* acid, in which the alkalies, as the *potash* and *soda*, and *lime water*, will be the most likely remedies to succeed, and should, therefore, be tried; but they seldom cure, (that is, dissolve the stone.) They appear, however, to diminish the irritability of the urinary organs in many cases in a considerable degree; and so palliate, though they do not cure.

Of the Diseases of the Bladder.

The urinary bladder is a muscular structure, very irritable, and possessed of a high degree of feeling or sensibility, whence its diseases are often of the most painful kind. They are likewise often attended with great danger, and are, some of them, incurable, or require the most painful and even dangerous operations for their relief.

The bladder is subject to all the diseases of vascular and muscular parts; especially to inflammation and its consequences. When the muscular coat or general substance of this organ is inflamed, the term *cystitis* is applied; when the mucous or inner coat only is affected with inflammation, it occasions an increased secretion of mucus, and has been called *cystirrhœa*, or catarrh of the bladder.

Cystitis or inflammation of the bladder, is characterised by more or less pain, chiefly seated above the pubes, and which is aggravated upon pressure made in this part. The irritability of the organ is very much increased; whence the smallest quantity of urine produces irritation, and a desire to void it. What is passed is frequently bloody, or mixed with mucus. When the neck of the bladder is much affected, there is a constant desire to pass urine, but an inability to do so; giving rise to retention of urine. The increased irritability of the bladder is in many cases communicated to the rectum, occasioning a frequent desire to pass the fæces.

If there should be any hardened fæces contained in the gut, their expulsion gives rise to considerable pain. The constitution in general suffers considerably; the pulse is frequent, and if the disease has continued for any length of time, the pulse becomes hard also. The tongue is furred and dry.

Causes.—*Cystitis* is produced by the casual causes of inflammation: exposure to cold; external injuries; and calculi, are among the common causes.

The *Prognosis* will of course depend upon the violence of the disease, as well as the cause inducing it. It may prove fatal quickly, generally by the inflammation extending to the abdominal cavity altogether, or it may end in gangrene. If produced by calculi, it may be expected to continue, though varying much in degree from time to time.

Treatment.—The treatment of inflammation of the bladder is similar to that of inflammation in other parts. *Bloodletting*, according to circumstances, will of course be our principal remedy. In addition to which, warm fomentations or the warm bath when practicable; mild cathartics; and, to relieve pain and lessen the disposition in the bladder to contract, opium may be required. Warm water, with opium, injected into the bladder, has been found to answer this purpose. Anodyne glysters also may be serviceable. In the employment of local *counter-irritation*, we should be particular not to use cantharides. *Alkalies* are often serviceable, by diminishing the acid acrimony of the urine. When the disease is of a chronic character and occurs in old men, as is frequently the case, we are obliged frequently to resort to the use of opium. The *uva ursi* has been much recommended, but, I believe, is of little value.

The *prostate gland* in old men often becomes diseased, and sometimes much enlarged. The swelling impedes the discharge of urine, and in most cases the bladder also becomes extremely irritable. This disease admits of but little relief from medicine, and that in general of a palliative kind; such as the occasional employment of opium and alkalies. Surgical aid is frequently called for, in order to effect the discharge of urine. But this is not within my province.

Cystic Calculi.

The composition of these is so various and different, that chemical agents of the most opposite character are required for their solution. Some dissolve in acids, others in alkalies; and even the same calculus differs in the composition of its different laminæ. This makes it difficult to determine the proper agent to be employed for the purpose, as there are no certain means of knowing the exact nature of the calculus present in the bladder. This, however, may be sometimes guessed at, by the quality of the urine at the time. But admitting that we could ascertain the precise nature of the calculus present, and that we knew the agent that would dissolve it out of the body, it would be of little use to us in practice, for there is no chance of applying it with effect in the living body. If we administer it internally, it must be in so diluted a state, and would be so liable to enter into new combinations before it could possibly reach the bladder, that it would lose its power. It has been plausibly enough proposed to inject the solvent into the bladder; but this organ is too irritable to allow of this being effectually done. The practice therefore has failed, and patients unfortunately are still obliged to submit to a painful and dangerous operation, in order to obtain relief, and even to preserve life.

Medicines, however, sometimes palliate though there is no reason to suppose that they have a power of dissolving calculi while lodged either in the kidneys or bladder. The fixed alkalies, *soda* and *potass*, appear to have been most useful in this respect. *Lime water* also has been used with advantage. The *magnesia* has been said of late to be a better remedy for the purpose, than either the alkalies or lime-water: but this, I believe, has been said rather *chemically* than *medically*, and is therefore not to be much relied upon.

In some cases, *acids* appear to have given relief, where *alkalies* failed. They are therefore proper to be tried; and the *muriatic acid* appears to be the preferable one for the purpose, as being less liable to change than the vegetable ones, while at the same time it is sufficiently mild for use.

FOREIGN DEPARTMENT.

ANATOMY.

On a variety of the Uterus in the Human Subject, compared with the state of this organ in Animals. By Mons. J. G. Martin.*

M. Geoffroy Saint Hilaire, in his paper on the female organs of generation, lays great stress on the case observed by M. Cassan.† In M. Cassan's case the parts bore a great resemblance to the sexual organs in the oviparous tribe; it is an intermediate state between the particular organization of two great divisions of the mammalia. In short, in the first class, or that of the common mammalia, the womb is the result of the perfect junction of the two lateral parts which compose it; in the second, on the contrary, as the marsupiæ, a kind of imperfection in the development on the median line is apparent, the effect of which is, that the constituant parts of the womb remain in these perfectly separated. In the case related by Dr. Cassan, the womb was neither completely natural nor completely divided; there was imperfect union of the two parts composing the uterus. The original preparation of M. Cassan proved to M. G. Saint Hilaire what he had long been seeking, viz., two organs establishing their mutual independance by differences of thickness, structure, and size, at the same time that a limit was placed between the uterine and *ad-uterine*‡ cavities by deliminations or distinct *ostia*, formed by the carneæ columnæ of the neck of the uterus. But the rudiments of the first of these two cavities only exist, as is commonly the case in the human subject; it is this constant arrangement which offers nothing analogous to that of the lower animals. There was wanting then an instance to show an unequivocal gradation in the formation of the part, one where the cavity of the uterus was not in a state of atrophy, but, on the contrary, in a state of unusual development; it is this which I was led by accident to observe in the human subject, and which will form the subject of the following paper:

Himsterbius gives, without any explanation, the plate of an uterus with *cornua*, which no doubt was nothing else but the two *ad uterum* portions separated.

Julius Absequens relates that, under the consulship of Caius Claudius and Marcus Porpennæ, a woman with a double vulva was found, and that when Lœtius and Domitius were consuls, a child with a double vulva was born (dead) at Rome. Riolans, who gives an account of this fact, omits stating that the child had two heads. The brother of Ranchin saw the uterus of a young girl divided as in bitches. In 1599, at the school of Milan, a woman was brought in for dissection with the uterus divided by a median partition.

Riolans opened, in the month of June 1581, in the village of Stein, near Saint Denis, the body of a young girl, who had styled herself an hermaphrodite, where the uterus resembled that mentioned in the last case.

Francois Antoine Catti, an Italian anatomist, is, according to Morgagni, the first who noticed the real division of the uterus in the female subject into two lateral parts. Greval has given the plate and description of a bicornated uterus, preserved in the Museum of Strasburg. A thick partition divides into two equal parts the cavities of the body and of the neck of the uterus; the vagina, single at its superior and inferior extremities, is divided into an anterior and a posterior portion, about two fingers space, by a transverse septum.

Madame de la Marche gives two figures representing a double womb, opening by two orifices.

Morand read before the Academy of Sciences (Paris,) a letter from Cruger, a Danish surgeon, which contained the case of a woman with two wombs, who died in child-bed*; belonging to each

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* Revue Medicale, July 1826.

† Recherches Anatomiques et Physiologiques sur les cas d' uterus double et de superfetation, par A. L. Cassan. Thèse soutenue en Mars, 1826.

‡ The term *ad-uterum*, in descriptive anatomy, corresponds to the body of the uterus; and in supposing this organ composed of two portions, separated in a vertical direction, the *ad-uterine* one would be on each side of the median line. According to this the uterine cavity is that formed at the neck of the womb.

* We once saw a similar preparation taken from a woman who died under similar circumstances. There were two uteri, but one only of them had become impregnated. The woman died from hæmorrhage shortly after delivery. The preparation is in the possession of Professor Carus, of Dresden, and the case has been described, we believe, by this excellent anatomist in one of his works.

uterus there was a tube, a broad and round ligament, an orifice, but only one vagina for the two.

Haller gives the plate of the uterus of a child a few weeks old, in which there existed a partition formed by three eminences, a variety which he had never before found. Afterwards he had an opportunity of witnessing the following case:—a young lady of noble extraction, twenty-six years of age, and for a long time past a valetudinarian, died one day suddenly in hysterics, to attacks of which she had been subject. On opening the body, there was one kidney only found, and this lay on the right side; it had lost its usual conformation, and contained two pounds of urine. 2dly, A double uterus, with two vaginæ, each had one ovary only of the natural appearance.

Purcell found in the body of a woman who died in child-bed, a womb with a tube, and ovary containing a full grown fœtus. On the left side there was another uterus with an ovary and a single tube. These two uteri, divided by a septum, communicated with each other at the neck; the vagina was also divided, and at its middle there was a longitudinal opening.

Dionys has left us the account of a person twenty years of age, in whom there was found a fœtus resting on the intestines; 2dly, The cavity of the abdomen filled with blood; 3dly, A body of a round figure, with an opening at its superior part, and of a size proportioned to that of the child, which was attached by its posterior to one of the sides; it was an *extra* uterus, situated to the left of the fundus of the other womb, which was only separated from it by a two finger's space. They were each provided with an ovary, a tube, and broad round ligaments. At the fundus of the proper uterus, which presented no irregularity, either in its direction or formation, Dionys discovered a false germ of the size of a small egg. It did not appear to him that the supernumerary organ had an opening into the vagina.

Canestrini has related a case which, in its details and history, has the most striking analogy with the preceding one. An Hungarian, in the fourth month of her third pregnancy, died suddenly, having suffered just prior to death, a lacerating pain in the lower part of the abdomen. On examination, there were found seven pounds of blood effused in the abdomen; 2dly, A fœtus enveloped in its membranes, and floating in the midst of the intestines; 3dly, A second uterus, at the base of which there was a rupture of an inch and a half in diameter. This uterus terminated by a pedunele, two fingers breadth in size, and which was attached to the right side of the neck, and about an inch above the external orifice of the proper uterus. In this direction, a tube capable of admitting a hog's bristle, afforded a communication between this appendix and the true uterus.

In 1752, the Count of Tressan found in a woman who had borne several children, a womb of an extraordinary form, and the figure of which was similar to that by which painters represent the heart. In short, there were two complete and well organized uteri, provided each with a distinct orifice. The broad and round ligaments, as well as the fallopian tubes, were not double. No mention is made of the ovaries. The inspection of these two wombs distinctly shewed that they had both been occupied; but it was impossible to decide which of the two had been most frequently.

Marquet states that on examining a woman, forty-eight years old, who had died of consumption, a double womb was found resembling two pears, with the bases opposed to each other, united at their necks, and terminating in a common internal orifice. This woman had borne fourteen children, but none arrived at the proper time. On all her childre n labour had been preceded with loss of blood, and followed by symptoms of an alarming nature. After being put to bed with twins, which had only reached four months and half, she was delivered a month after of a six weeks fœtus.

Valisneri mentions that in a woman whom he examined, he found two distinct wombs, separated from each other by a thick membrane, and provided each with a single ovary and tube. The neck of the one was bent towards the rectum, in o which it opened about an inch above the sphincter ani.

Tilinge has also observed a double womb.* Tisenmann has transmitted to

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* We subjoin references to a few cases of double uterus, in addition to those mentioned by M. Martin.

1. Gravel in his *Dissertatio de superfœtatione*, represents two cases of this kind. This dissertation is reprinted in the 5th Vol. of Haller's Selectus Disputationum Anatomicarum, page 335.

2. Eisenmann, Tabulæ Uteri duplicis, Argentorati, 1752.

3. Bœhmer's *Observationes Anatomicæ*, in the 2d Vol. A most beautiful plate.

4. J. Walter, *Betractungen über die Geburtstheile des weiblichen Geschlects.* Berlin, 1776.

us the history of two cases of bilocular uterus. Of all these, the case of Tisenmann has the greatest analogy with that of M. Cassan, the particulars of which are as follow. A woman, thirty years of age, and, according to her account married, died of phthisis; M. Cassan, who made the post-mortem examination, was struck with the peculiar position of the peritoneum, which appeared to divide the womb into two lobes. On a more attentive examination the existence of a double womb was discovered. In the vagina, there was a septum extending to the neck of the womb, or rather to the junction of the two necks, each of which was connected to a distinct womb. Belonging to each uterus there was one ovary; two round ligaments supported equally both organs. This case is detailed with great precision and care in Dr Cassan's thesis. The one which I am now going to describe, came under my notice at the Pitie, and was admitted in the division under M. Serres.

Case.—Marie Duguet, æt. 36, was brought to the Hospital with acute pleuropneumonia. The state to which the patient was reduced prevented any questions being put to her, and she expired forty-eight hours after admission.

Inspectio cadaveris.—There were strong adhesions between the pleura costalis and pleura pulmonalis. The pericardium contained a great quantity (7 oz.) of clear serum; and there was slight hypertrophy of the left ventricle, with marked dilatation of the right cavities. The sigmoid and mitral valves were cartilaginous and slightly ossified. From the convexity of the arch of the aorta, four instead of three arterial trunks arose, viz. the right subclavian and the right common carotid by distinct trunks, and the same arteries on the opposite side; these four vessels were about the same size. The abdominal viscera presented nothing remarkable. The womb was situated in the small pelvis, and it occupied the median line, although it appeared thrown to the left side. This appearance was owing to the unusual development of the left cornu of the uterus, on which there was a tumour, which on close observation I found to be composed of the same tissue as that of the womb. On laying open this organ, we saw 1st, on dividing the mouth a small canal two lines and half in length, immediately behind an oblong cavity sufficiently large to admit an egg. After this cavity the same appearances presented themselves, a second contraction and a second cavity similar to the first, being nine lines and half in its largest diameter, and containing a small polypus implanted on its anterior and superior part. The shape of the womb was something similar to that of a hour glass.

Varieties in the form of the uterus, and indeed of the female organs of generation generally, are of such constant occurrence, that we have given M. Martin's case, not because as he terms it, an instance of unusual development of this organ was wanting, but because this peculiar kind of enlargement is rather rare. Wenzel (Charles) in his work on diseases of the uterus, mentions cases of enlargement, and Sœmmerring also says that he saw in the possession of the Wenzels at Mayence, an uterus so much increased in size, (not by any diseased product, but by the growth of the natural substance of the organ itself,) that it had quite lost its usual form.

5. Acrell, *Chirurgische Vorfälle*, Gottingen, 1777.

6. Bose, *Uteri per Morbum bifidi exemplum*. Lipsiæ, 1779.

7. *London Medical Journal*, for 1781.

8. Leveling, de Utero bicorni. Ingolstadis, 1787. Reprinted in his *Observationibus Anatomicis*.

9. Böttcher, in the first part of his *Vermischte chirurgischen, Schriften*, 1791.

Other cases of this kind are mentioned by authors, but by far the best plates of this variety will be found in the works to which we have referred above.

PHYSIOLOGY.

Experiments on Absoption, by David Barry, M D, Resident Physician in Paris.*

Eight grains of the white oxide of arsenic were introduced into the cellular tissue of the thigh of a dog, and the wound united immediately by a suture. The same thing was done on two other dogs, and with the same precautions. Three quarters of an hour afterwards a cupping-glass was applied on the first dog and the others left to their fate. In the first animal a flow of saliva was observed for half

* Annales des Sciences, July.

an hour after the application of the glass, which was left on the wound for five hours in succession. The glass was then lifted, the wound opened, the arsenic taken away by excision of the part, and the wound itself well washed; no symptom of poisoning followed. The two other dogs before the end of the third hour were seized with vomiting purging, and tenesmus, and finally became attacked with convulsions. The one died eleven and the other eighteen hours after the operation.

As to the effect of the cupping-glass applied on the poisoned wound, with the view of arresting the symptoms, we shall transcribe the words of Prof. Adelon, who had the kindness to be present during the experiment.

"In the first rabbit six drops of hydrocyanic acid were introduced into a wound, made in the skin, and two minutes afterwards the animal died. Six drops were introduced under the skin of another rabbit by a wound of a similar nature, and the cupping glass immediately applied. Eleven minutes afterwards the glass was removed; the animal at this time having experienced no bad effects from the operation. In one minute the animal was seized with such strong convulsions that death was supposed to be near at hand. A sucking-glass was applied, and in proportion to the power that the glass exerted, the respiration became more strong, the tetanic convulsions diminished, and in four minutes the animal was to all appearance completely recovered. Sixteen minutes afterward the cupping-glass was again taken away, and in two minutes the opisthotonus came on to a severe degree. The cupping-glass was again applied, and these symptoms again vanished. Twelve minutes afterwards the glass fell off without the convulsions re-appearing, and in ten minutes more the animal was quite well and began to eat."

In order to see if the glass acted in removing a certain portion of the poison that had been absorbed or introduced through the cellular tissue, a drachm of the saturated solution of the sulphate of soda was introduced into the skin, at the inner part of the thigh of a dog; the place was wiped, and the glass again applied. In a few minutes after the application, Mons. Petroy found by means of a test, that the salt which had been injected, was in the fluid, removed from the wound by the cupping glass. These experiments, and several others similar to them, were repeated in various ways, in the presence of Messrs. Laennec, Orfila, Adelon, Pariset, Andral, Segalas junior, Meriadec Laennec, Petroy."

In order to extend the application of this remedy to the prevention of poisoning by external absorption, I caused several dogs and rabbits to be bitten by snakes; to some I applied the cupping glass, to others I did not; and although the latter did not die, I obtained, as far as concerned the symptoms, results analogous to those which the preceding experiments afforded me, viz. that the animals bitten by one, two, and sometimes three vipers, on which the glass was applied for half an hour, did not experience any sign of *general* poisoning; whilst, on the other hand, those which I abandoned to their fate, were seized with serious symptoms, such as vomiting, convulsions, &c.

The local action of the poison appeared to be concentrated in the middle of the part on which the dry cupping-glass was applied, and this was more constant in dogs than in rabbits, on account of the density of their skin. The glass did not cause the exudation of any perspirable matter across the skin of dogs, whilst there was an abundance of it in the rabbits.

Experiments on the Absorption of Wounds.

On the 12th of August, 1825, at nine, a. m. in the presence of M. Longley, one of the censors of the University of Oxford, Dr. Wilson, of the same University, and MM. Laennec, I made a small wound in the left thigh of three healthy grown up rabbits. The wound in each was of the same size; it was filled with the same quantity of impure powdered strychnine at the same instant, or at least there was not a minute difference in the filling of each. Forty-five minutes after the application of the strychnine, no other symptoms than those of a slight convulsive motion of the muscles of the jaw coming on, we made the wounds deeper and more extensive, and put in them a fresh portion of strychnine. Fifteen minutes after this second application, the two rabbits were seized with very severe convulsions, which lasted some seconds. We then applied the sucking-glass on one; and left the other to fate. The one on which the glass was placed, recovered in about three quarters of an hour, and the other died fifty-five minutes after the second application of the strychnine. The same experiments were repeated with the upas, pure strychnine, and the bites of vipers, and with the same results.

From these facts, Dr. Barry draws the following conclusions:—1. That the first

process in absorption, the process by which foreign substances penetrate into the vessels, whether this be by an artificial opening, or through their pores, is placed exclusively under the influence of atmospheric pressure; and that the passage of these substances to the heart is placed under the same influence, as well as that of other minor circumstances, which assist the venous circulation. Thus absorption is submitted entirely to the laws which preside over the course of fluids in animals which respire by the active dilatation of the thoracic cavities.

2. That in all the cases of poisoning by wounds, either by the simple deposit of the poison, or by its injection, as in the bites of vipers and other poisonous serpents, the application of the glass may save the individual, provided it be done with the necessary precautions, and before a sufficient dose to produce death be absorbed.

3. That as the local action of the poison and the imbibing power of the tissues take place under a vacuum, the parts ought to be excised after that the poison is concentrated in them by the effect of the glass. The glass ought to be applied again for some minutes, to empty the divided vessels, after which the actual cautery may be applied, but never before the application of the glass, because then it would be useless, the mouths of the vessels being hermetically sealed.

4. That in the case of bite from mad dog, we may presume from the nature of the local effect of the poison, that the application of the glass in the first place, and afterwards the excision of the part, and cauterization of the wound will prevent every kind of accident.

5. The experiments made with the vegetable and mineral poisons having proved that the repetition of the tetanic convulsions is produced by the continuance of the absorption of the poison placed in the wound, and every thing leading us to believe that a fresh absorption commences in wounds even if they are cicatrized when they have been inflicted by rabid animals, the glass ought to be applied at the moment when symptoms of madness manifest themselves, the parts excised, burnt afresh and kept as much as possible from the effect of the air.

6. That in the case of wounds received during dissection, the wounded parts should be sucked to dryness, and then covered till complete cicatrization takes place.

7. That if a person in dissecting an animal which has died of carbuncle should have the misfortune to prick himself, a glass with a convenient edge should be applied to the surface of the pricked finger, and all the ulterior precautions be observed which we have already indicated.

PATHOLOGY.

Observations on Abscess of the Liver,
By M. Louis.

In the second number of the *Repertoire d'Anatomie*, which has just appeared, M. Louis has given five cases of hepatitis, accompanied with abscess of the liver, on which he makes the following observations. Like almost every thing he has written, they are worthy of attentive perusal.

If these cases of hepatitis were simple diseases, or if without being simple they had only presented slight modifications, capable of exerting but little influence on the progress and symptoms of the principal disease, we might dispose of them in a short and general manner. With one exception, however, disease always appeared in the course of other diseases, so that in relation to the symptoms, the general history of hepatitis ought to limit us to the consideration that the jaundice, and the pain in the right hypochondrium, occurred in four out of the five cases, and the tension in the same part

only twice; symptoms which, when occurring together, have been long recognized as marking inflammation of the liver; but isolated, or even any two together when they occur in the course of an acute disease, possess little or no value; for if we take the jaundice, we find it frequently present when the liver is not inflamed; and in regard to the pain, it may arise from so many different causes, that it is also no decisive symptom of this complaint. But it is quite a different case when these symptoms, the pain in the right hypochondrium and the jaundice supervene in the course of chronic disease, (cancer and other organic diseases of the liver excepted,) for we never saw the icterus in this case without there being at the same time an inflammatory affection of the liver. None of the patients felt the pain in the right shoulder, and we even doubt whether this symptom mentioned by authors really belongs to those marking hepatitis. Probably in the cases where it has been observed there was, besides the affection of the liver, some disease of the lung, or of the pleura of the right side, to which the pain in the shoulder might be referred. Authors have endeavoured, as in most other diseases, to discover the causes of this disease, but with the usual want of success. Warm climates have been mentioned as one of the most active causes of inflammation of the liver; but this has been denied by physicians of great talent, as for instance, by Peter Frank, who practised himself in a warm country. It has also been recently said, that when hepatitis has not been occasioned by external violence, its cause may be constantly traced to an inflammation of the mucous membrane of the duodenum. We do not mean to deny that these two lesions may not exist at the same time, but the result of our observations has proved to us satisfactorily that this is far from being constantly the case, since in the four cases where the mucous membrane in question was examined with care it was found perfectly healthy, if we except, in one case, a slight degree of *ramolissement*, without any change of colour. But perhaps doubt will be raised on the accuracy of our observations, and it will be said that it is at least extraordinary, that having found the mucous membrane of the stomach and the jejunum inflamed, without that portion of the gut placed between the two being affected. To this we reply, that when the mucous membrane of the stomach is inflamed, the inflammation generally stops at a certain distance from the pylorus, and that when the inflammation attacks the mucous membrane of the jejunum, it generally commences up that portion nearest to the cæcum, and but in very few cases ever extends to the duodenum. It is the state of the lymphatic glands in inflammation of the mucous membranes, to which they correspond, that has given rise to duodenitis being admitted as the cause of inflammation of the liver; but the analogy is far from being complete, and if it were complete, it would merely be a fresh proof that it is not an unfrequent cause of error.

Wounds of the head have also been enumerated by authors, as giving rise to abscesses of the liver. Without entering into a detail of the reasons which have induced us to doubt this circumstance, we will only state that one of the explanations for a long time put forth in support of it, appears to us entirely devoid of foundation. It has been supposed indeed that in wounds of the head there has been a stagnation of blood in the right cavities of the heart, thence *engorgement*, and finally inflammation of the liver. But in the diseases of the heart, where this *engorgement* is much more certain and more considerable than in any other affection, the abscesses of the liver are not more common than under other circumstances; and to speak of the facts which have only come within our own observation, we should say that of forty-five persons who died of disease of the heart, we have found an abscess of the liver in no single case, so that the mechanical congestion does not seem to be the cause of inflammation of this viscus more than that of any other part.

In reference to the pathological anatomy, the cases present some interest, inasmuch as they shew that the abscesses of the liver frequently contain pus of good quality, and that they may be encysted, which is most commonly the case, or not, according to circumstances. Softening of the liver has been already noted by several observers of nature, and among others by M. Lallemand* in a case of acute inflammation of this organ. But in respect to the softening, we must here state that the consistence of the organs in the natural state is not always the same, for instance, that of the muscles; and that in several diseases where the heart is extremely soft, one could not suppose that it had been previously inflamed. This is the same with the womb which expands

* Troisième lettre sur l'Encephale, p. 351.

and becomes softened during pregnancy, by a process different from that of inflammation; and if this be true of the muscles, heart, and uterus, may it not be so with the liver, the firmness, colour, and size of which are subject to such constant and great variation? But a very remarkable fact in abscesses of the liver is, that no cicatrices are to be met with in the parenchyma of this organ. We have never seen them ourselves, though it is proper to mention that M. Merat in an interesting paper on hepatitis in the *Dictionnaire des Sciences Medicales*, says that these productions have a stetuated form, and may be regarded as cicetrices. But it is evident that before this be admitted, the cicatrices ought to have been seen in all their stages.

Lastly. Although four of the five persons were jaundiced, the biliary ducts had not ceased to transmit the bile into the small intestine, even in a case where a calculus of considerable size in the cystic duct, pressed on that belonging to the liver. It is not the first time we have had the opportunity of observing jaundice take place without any mechanical obstacle to the course of the bile; in fact, in no case within our own immediate observation have we been able to trace the jaundice to this cause.

JOSEPHUS BURNS, ESQ.

TO THE

EDITOR IN THE COUNTRY.

You said last week you would write me some letters on the state of medical science in the country, as Mr. Cobbett does on the state of the turnips for the Register; but you have failed to do so. You said I had "*ratted*," because in the preface to my forthcoming work on Hospital Discipline and operations for hernia, (which by the bye you had no right to publish without my consent,) I reprobated the present system of electing and retaining ignorant, decrepid, and incompetent men to fill the great offices of hospital physician and surgeon. Why you know, from the first moment we became acquainted, I always told you that I disapproved of such nefarious practices, and moreover, said that I would give up my situation of hospital surgeon the moment I felt myself unfitted by age or infirmities (and you know there are many sorts of infirmities) from doing my duty, and not like Mr. ABERNETHY, declare myself incompetent, but continue in office.

By my exertions, great improvements have been made in the art of surgery; I have shown, as you know, my superior method of operating to my ignorant colleagues at the Middlesex, more than once; but it is all lost upon them, and to say the truth, I am determined to cut all connexion with them if they do not mend. I fear they are incorrigible miscreants, and I see no alternative, but that of putting them upon the half pay list, like poor Sir Ludford and brother Ben, or to give them a seat at Lincoln's Inn, by the side of brothers Lynn, Norris, and Forster. You know I always was a good-natured fool, and I still like to be charitable, though I am sorry to say these cutters at the Middlesex have almost cut me out of all practice; such is the consequence of associating with bad company. Why, even GUTHRIE told me the other day, he wondered how I could stand it, and BRODIE and BENJAMIN were both at me to intercede with you in their favour; poor fellows, it was a moving sight to see their long faces; they swore by Jupiter that they must give up cabkeeping if you continue to pelt at them. We have had no operation at our place for the last five weeks, and God only knows when I shall ever have another opportunity of showing our lithotomist how to avoid the evils of an irregular distribution of arteries. I have a mind to go into the Borough twice a week, or, by my troth, I shall forget how to handle a chirurgical instrument. It is of no use to write to you about the bustle of lecturers all setting forth their blandishments, and declaring that they mean to treat the "subjects fully." Heaven knows they have been very emptily treated too long. Now as you may depend on my services, I advise you to remain awhile, where,

> "Nor rural sights alone, but rural sounds exhilarate the spirits;"

to acquire fresh vigour for the ensuing campaign, and above all things to stick to your troublesome old fashioned manner of telling the truth.

Yours, in the cause of Independance,

JOE BURNS.

THE LANCET.

London, Saturday, September 16, 1826.

In the last Number of our Medical and Physical contemporary, Mr. Earle has related "a case of bronchocele, in which the superior thyroid arteries were tied." A girl of 17, native of Malling, Kent, having dysmœnorrhœa, pain in the chest, severe cough, and bronchocele, was admitted into Bartholomew's Hospital to the care of Mr. Abernethy, December 2d, 1822. As might have been expected, the diet was regulated according to Cornaro, and the *secretions* duly attended to; the neck was bathed with tepid water. Under this treatment "some amendment took place," but the pulmonary symptoms increasing, she went into the country in the month of February.

On the 15th July, 1823, she was again admitted as patient of Mr. Earle.

"She stated, that on her return into the country her health improved, and cough subsided, but the tumour continued to increase, particularly during the last two months, causing so much difficulty of respiration, as at times to threaten suffocation.

On the evening of her admission, her difficulty of breathing was extreme, and she was wholly incapable of swallowing any solid food; her pulse was 120; bowels costive; the catamenia had not appeared for five months. The cough and pain in the chest had returned with aggravation; head ache and drowsiness constant. The bronchocele was evidently much increased. The superior thyroid arteries were greatly enlarged; that on the right side communicating a peculiar thrill when felt, which led to the supposition of its coats being diseased. Leeches and evaporating lotions were applied to the tumour; and pil. hyd. gr. v., and pil. aloes c. myrrha, gr. x., were ordered to be taken every night.

The leeches were repeated on the 16th, 19th, 22d, and 25th, without any decided benefit. She also took liq. potassæ hydriod. m. x. ter die; but this producing considerable nausea, was soon discontinued. On the 1st of August, it was evident that the tumour had augmented since her admission, and her breathing was become so extremely laborious, that it was apparent she could not long survive without some relief being afforded. Under these circumstances, I determined on tying one of the thyroid arteries.

On the 2d, at half past twelve a.m. (p.m.?) I passed a ligature round the right superior thyroid, which was much the largest. The vessel was healthy, but enlarged to nearly the size of the carotid. The most acute pain in the head immediately followed the tightening of the ligature. The pulsation in the tracheal side of the artery diminished materially, but did not entirely subside. About half an hour after the operation, the pain in the head continuing, twenty ounces of blood were taken from the arm, which afforded some relief. Cold cloths were directed to be constantly applied to the tumour, and the patient's head was much elevated with pillows. At 4 p.m. the pain had abated, but there was much drowsiness; the pulse at the wrist quick, but not full; the carotids beating with greater violence than before the operation, the pulsation being evident at some distance along the course of the thyroid up to the ligature. Saline purgatives, with tincture of digitalis, were ordered her."

August 3d, she passed a bad night; her pulse was rapid, tongue furred, and the drowsiness amounted to coma; the pulse in the carotids greatly exceeding in proportion that at the wrist. The bowels were moved with calomel and jalap, and twenty leeches were applied to the temples, which continued bleeding the whole day, and afforded much relief. In the evening all her bad symptoms had abated, and her breathing was greatly relieved. She passed a good night, and continued to improve.

From this period the case proceeded favourably. That portion of the artery between the ligature and the carotid soon ceased to pulsate; respiration and deglutition were performed with greater facility, and by the 24th of the month, the bulk of the tumour had diminished 3½ inches, principally on the right side. The patient went into the country, promising to return "if the tumour at all increased."

On the 11th of September she came back, in consequence of her finding the tumour remain stationary, and the artery on the left side pulsate with increased force. On the 17th the artery was se-

cured; it was healthy in its texture, and about the size of the radial artery. The patient suffered a good deal from hysteria and apprehension before the operation, dreading a return of the severe pain in the head, and coma. Leeches had been previously applied, and her system much depleted by saline purgatives. No alarming symptoms followed the application of the ligature. The diminution in the size of the tumour was not nearly so great nor so rapid as after the first operation. The ligature came away on the 1st of October, on which day the menses reappeared, after an interval of nearly seven months.

On the 10th, the patient finally left the Hospital, having no cough, no impediment in swallowing, and respiring with perfect freedom. The tumour was evidently smaller and softer, and appeared more divided in its texture. I heard from her in November, and again in January, 1824, at which time the tumour continued slowly to decrease, and the health was greatly restored."

Mr. Earle remarks that the termination of this case was the more gratifying, as "it was the general opinion, before the first operation, that all attempts would be vain, in consequence of the supposed disease of the girl's lungs." We think no functional derangement of the thoracic viscera, whether of the heart, or otherwise, should deter a surgeon from operating. What "*disease*" of the lungs was "supposed" in the present instance, we are not informed, nor does the cough, the only symptom described, help us much to conjecture.

Mr. BABINGTON, a surgeon to the Lock Hospital, has related a few cases of phagedenic ulcer, some treated with mercury, some with opium, and one, as he tells, with "*a solution* of the nitrate of mercury *in lime water*"! He talks, also, of "a slough melted down into pus," and many other things that we need not enumerate.

Mr. T. W. CHEVALIER has occupied five pages of the journal "to prove that there is danger in dilating the female urethra *too rapidly*"! "Even greater danger, he continues, "than in inflicting the severest pain for many hours;" and hereby hangs a tale.

A girl of small stature, and feeble habit, had stone in the bladder:—

At *two o'clock* in the afternoon, her bowels having been previously opened, the patient was placed upon her back on the bed; and the *smallest* dilator urethræ being found considerably too large to pass, I introduced into the bladder a phimosis dilator, and with this instrument I felt the calculus. The first attempt to open the bladder by the action of the screw gave considerable pain, which continued to increase until their widest divergency, to the extent of three-fourths of an inch, was accomplished; viz., in the space of half an hour, at intervals of from two to three, or four minutes. Some blood had oozed, and *the sufferings of the patient had become exceedingly severe.* Considerable force upon the screw was required after every pause, to effect further dilatation; and the *sides of the urethra appeared as tense as although ready to tear.*

This was *half past two.*

The dilator urethræ was now introduced with the blades closed, in which position they composed a cylinder of half an inch in diameter. This instrument could not yet be passed into the bladder, *for the blades of the former, as well as these also, were so insufficiently firm, that their extremities could not be separated within the neck of the bladder to nearly the same extent as at their bases!* The dilatation was now continued, therefore, without the neck of the bladder, to the extent of an inch; and afterwards this instrument was introduced, with the blades closed, into the bladder, to feel the stone, and the blades separated to their widest extent, viz., to an inch and three quarters. *The pain, since the first introduction of this latter instrument, was as severe as can well be conceived, being as violent as any bodily suffering I ever saw under any circumstances, and altogether without remission.*

He was "happy to find," he says, and we do not doubt it, "that the surface of the urethra was *merely abraded*," having no perfect "assurance hitherto of the urethra remaining untorn." He now —— dilated the parts by expanding the blades with more and more rapidity, in different directions. By this means the

urethra was enlarged to a considerably further extent than by their first expansion. Although the calculus could now be felt with ease, and turned in any direction, the canal was found to be still too narrow to admit of its exit, and I therefore continued to increase the distension by means of my fore-finger and the closed forceps, until at length, AT HALF PAST FIVE O'CLOCK, it became practicable to bring the stone into the urethra. After this was accomplished, however, it could not be withdrawn without great difficulty; so much so, that the *interior part* of the lining membrane of the urethra was *brought down* into view, &c.

We rather think Mr. Chevalier has "brought" himself "down into view," after a somewhat graceless fashion; for although the dilatability of the female urethra will not be questioned, and the propriety of some such operation may not, his bungling, first as to the manner of dilating the urethra, which was the worst; secondly, as to his instruments, which he tells us were insufficient; and thirdly, in keeping a poor girl "of feeble habit and delicate constitution," in the most violent state of bodily suffering "that he ever saw endured," for the space of *three hours and a half*, "without intermission," all the time too in a state of uncertainty, for the operation might have been unsuccessful, surpasses any thing that has been told of Joe Burns. The urethra sloughed, and the operator expresses his "great *disappointment* that there ensued incontinence of urine almost complete"!!! How any man could be disappointed at such an event, now that the functions of parts are somewhat generally understood, does indeed surprise us; but as Mr. Chevalier's operations are calculated for dead subjects, so it is probable that his physiological notions are derived from the same source. The calculus was of no unusual size, its largest circumference being only three inches and nine-tenths, and its smallest three inches and nine-twentieths. It "might be felt with ease, and turned in any direction;" that it was not broken down in the bladder, is therefore quite inexcusable. The poor girl ultimately recovered.

Mr. BELL, or some young gentleman of his establishment, has related three cases of injury to the thorax followed by emphysema; one of them, however, is so grossly inaccurate, that we are not disposed to give much credit to the remainder.

The case in question was admitted into Middlesex Hospital, Nov. 13, 1823, and reported in THE LANCET, Vol. I., p. 241, by the only gentleman, except the house surgeon, Turner, who was present at the time, or who saw it, till the following day. Our readers can refer to the case, and then hear the scribe in the yellow journal.

Who *says*:—"There was a wound below the inferior costa of the right scapula, through which the air rushed violently. On introducing the finger into the wound, the direction of which was upwards and forwards; a rib was found to be fractured, and the finger passed easily into the cavity of the chest."

V. s. ad. ʒxx., and then he goes on to describe the strapping and bandaging and what was given the patient, and says:

"In the evening the difficulty of breathing was very great, the pulse was slow and oppressed. He was again bled to faintness.

Next day his breathing was easier; *there was no emphysema*. He was now ordered to take a saline draught, *with the acetate of ammonia, three times a day*.

The cure proceeded very favourably under the use of free depletion, (bled twice!) and on the *twentieth day* he was so far recovered as to request to be allowed to leave the hospital. He was shortly after dismissed, Dec. 23d.

So saith CHARLES BELL, or his myrmidon. "Now mark how plain a tale shall set him down." Harrington was admitted into the Hospital about five o'clock p. m. of the 13th Nov. 1823, with a wound in the situation described, through

which the air "did NOT rush" either violently or otherwise; nor did the finger "pass readily into the cavity of the chest." Both are gratuitous assumptions of the writer. Mr. Bell neither saw the patient when admitted, nor the wound on the following day, the dressings not being removed. That he was "bled to twenty ounces" is true, and stated in our report, but that he was "again bled" in the evening is not, although he was on the following day, when, according to Mr. Bell, "his breathing was easier," and "*there was no emphysema.*" Here he is right; there *was no emphysema*, which, *had* "the air rushed violently through the wound," there should have been. "He was ordered," says Mr. B., "to take a saline draught, *with* the acetate of ammonia, three times a day." Now the fact is, that the "saline draught" of the Middlesex Hospital, is *composed* of acetate of ammonia and water, and nothing else; hence we might infer, if we were not already sure, that Mr. Bell is a very pure surgeon, who rarely knows the composition of the medicines he orders. But the patient was not ordered "a saline draught," the *infus. lini opiat.*, the common cough mixture of the Hospital (infus. lini, ℥iss.; Tr. camph. co. ℥j. ter die,) being given him. Lastly, the murder is out; the patient was admitted on the 13th November, and "on the twentieth day," "requested to be allowed to leave the Hospital;" this "twentieth day," according to Mr. Bell, happening on the "23d of December"! The case is mutilated and misrepresented from THE LANCET of 1823, and so clumsily performed, that the writer has mistaken the 23d of *November* for the 23d of December, besides contradicting himself in many other particulars. The wound, he says "took on the adhesive process," whence the "*speedy* and favourable termination of the case," forgetting that by his own showing, after spending 40 days in the Hospital, the patient was only "*so far* recovered as to request to be allowed to leave!" So much for a *speedy* adhesive process. But we are ashamed to point out the contradictions and inaccuracies which crowd the page, and recommending the reader to swallow the other cases *cum grano salis*, take our leave for the present.

J. BURNS.

A Critical Inquiry into the Ancient and Modern method of curing diseases in the Urethra and Bladder, and of the successful practice of Vesicæ lotura, for the cure of diseased bladders, &c, &c. By JESSE FOOT, Surgeon, carefully revised and corrected by JESSE FOOT, jun., Member of the Royal College of Surgeons.—8th Edition; 8vo. pp. 201., Highley, 1826.

WE thought Mr. Foot's work had, ere now, merged in the gulf of oblivion. It seems, however, that it is still sought after, which has induced his nephew to publish the present edition; but as nothing, save an editorial preface, is added, and as a practice which might have possessed something of novelty thirty years ago, has long been trite and common, there is nothing to justify an extended analysis. Lotura vesicæ, or injecting the bladder, a practice first adopted by Le Dran, found a ready advocate in the person of Mr. Jesse Foot, and has since been adopted, though often with uncertain success, by most surgeons in this country. *A priori* it is sufficiently feasible, and with due attention to the susceptibility of the organ, and to the composition and strength of the fluids injected, has sometimes been of service. The observations on obstructions in the urethra, &c., as well as the cases contained in the volume, are not undeserving of notice.

A Regulation was passed last week by the committee of the Eye Infirmary, that no cases or notes of cases shall be taken by the pupils attending it. The pretext for this regulation we have not heard, and indeed it would puzzle any body but the committee to discover one. The fact is, that few or no cases have been taken at this Institution for a considerable time past, but at the express desire, and for the particular use of the surgeons themselves. From the number of patients for which each surgeon has to prescribe, within the limited space of two hours, it is quite impossible, if many cases should present themselves which they might wish to take, that they could do it themselves. The present regulation, therefore, (and this is not a solitary one, by the bye,) is an insult to the pupils of the Infirmary, but more particularly to the surgeons under whose sanction and at whose desire pupils have so long taken cases. We trust these latter gentlemen will immediately remonstrate against the measure, and if remonstrance should prove unavailing, take some decided steps to emancipate themselves from the tyraldom of a few ignorant men, who, for some time past have been seeking every opportunity (for what purpose we are well acquainted) to make the situation of the present surgeons as irksome as possible. From such committees, good Lord deliver us!

Baron Dupuytren, Surgeon to the King of France, and first surgeon to the Hotel Dieu, has lately arrived in this country, for the purpose of visiting our principal hospitals. He was at the Borough Hospitals on Friday, when some operations were performed by Mr. Travers, who complimented the Baron by telling his pupils that they were in the presence of one of the first surgeons of Europe. The Baron, however, paid Sir A. Cooper the same compliment last year, at the Hotel Dieu, with much better grace.

We can vouch for the accuracy of the following statements respecting Bartholomew's Hospital.

To the Editor of THE LANCET.

SIR,—There are only two persons at this Hospital whose books are worth looking at, namely, one surgeon and one physician. It is true that at the head of each surgical bed, is a ticket with the patient's name and disease, together with the doses of certain medicines composed according to formulæ known only to a few pupils; for notwithstanding the surgeons prescribe according to the "Pharmacopœia nosocomii Sancti Bartolomæi," the physicians' pupils only, of which the number is very limited, can obtain a copy of it. It is no uncommon thing for five or six surgical pupils to worry a physician's pupil almost to death, if he happen to have his pharmacopœia with him in the ward. So great is the anxiety of the surgical pupils to possess themselves of that which *they cannot obtain*, although the book was printed at the expense of the Governors, and given to the Hospital.

AN OLD STUDENT.

SIR,—I beg leave to lay the following before you, the reformer of abuses, and of hole and corner surgery.

A medical friend of mine from the country, on a visit to town, asked me to accompany him to St. Bartholomew's Hospital. We were there in time, but as the surgeons did not appear in any of the wards, we followed some of the students to the Inspection Room. When we came out, we were asked sixpence each. I told him we were strangers;—he said it was no matter: of course we paid.

Now, Sir, I should like to know, by what authority they act? Who pockets the money, or what becomes of it? The student, I think, pays enough of admission money, without being subjected to a "fine" of sixpence for each inspection. This is a sure method of discouraging morbid anatomy. If the above abuse calls for redress, by inserting it you will oblige

A WEST-END PRACTITIONER.

These are "important particulars," directly supporting the truth of our statement respecting the *delenda* of this school of surgery. We trust the teachers will apply themselves to the task.

THE ZOOLOGICAL SOCIETY.

THERE are some departments of science in which our continental neighbours have made much greater progress than ourselves; and, singularly enough, this has happened more particularly in a certain branch, in which, from our local and commercial advantages, we ought to have been the precursors.

Zoology, which, as a matter of study, offers peculiar attractions, as illustrating the most interesting series of Nature's laws, and as connected with the history of almost an infinity of beings subservient to the support and comfort of mankind, has received in England, until very lately, no public encouragement; whilst in Germany, in France, and even in lazy Italy, it has been fostered by their respective governments with a liberality which does them honour.

We are glad to see that an Institution has at length been formed in this country for the prosecution of so interesting and useful a branch of study, and hope that it, will receive that patronage which it deserves from an enlightened, and more especially from the medical public. With the cultivation of zoology, another field of scientific labour will be opened, namely, comparative anatomy, which has so mainly contributed to unravel the difficulties of the intricate texture of our own bodies, and thus contributed both directly and indirectly to the advancement of physiology, and with it, of pathology, and ultimately to a valuable saving in the amount of human suffering. The medical students of this country have not had the advantages in this respect which have been long enjoyed by those of other countries; but have been compelled, for the want of opportunity at home, to visit foreign schools, if their ambition has tempted them to ascend the higher steps of medical education.

It is a fact worthy of notice, but which, we hope, will not be said of the future, that the majority of the animals found in our own kingdom, and in our own colonies, have been described by the pens of foreigners. And as if to shame us for our apathy, or to excite us to some emulation, it has often happened that these very products of foreign industry and talent have been dedicated to the Royal Society of London. We may mention a case which has occurred in the present year; MECKEL, that persevering and scientific anatomist of Halle, who, next to Cuvier, has dissected more than another man in Europe, has dedicated his description of the duck-bill (ornithorynchus paradoxus,) brought from our own colony of Botany Bay, to our Royal Society, and has given a perfect account of the structure of that curious mammal; not deeming the account which Sir EVERARD HOME published of the same in the Philosophical Transactions of 1820, as intended for a complete work. One instance more will suffice to show the extent to which this has been carried. Of the new species of mammalia described in the superb work of GEOFFROY ST. HILAIRE, and CUVIER, more than one half are natives of India, and were preserved alive for many years in the public collection of Barrackpore; and nearly the whole of the materials for their history were collected by an individual, DUVAUCEL, who has done more towards illustrating the natural history of the quadrupeds of our Indian possessions, than by the whole of our own countrymen abroad or at home.

At present, the Zoological Society is the offspring of a union of individuals, and has received as yet no support from the government; which has usually shown itself ready to follow, never to lead, he

public opinion. Previously to the meeting in April last, nearly three hundred persons had signified their intention of becoming members, and among these were names distinguished in science, rank, and affluence. Since that period, about a hundred additional names have been subscribed, and the interest excited in favour of the Society, appears to be still on the increase. A house has been taken in the most central part of western London, which is now preparing for the reception of the collections already placed at its disposal; and it is expected, that in a short time nearly two thousand species of the mammalia and birds, a number exceeding that in the British Museum, will be ready for exhibition. But the views of the Society extend beyond the preservation of the stuffed skins and lifeless bodies; they embrace the maintenance of living animals. Ground has been obtained for this purpose in Regent's Park, in which aviaries and enclosures of various kinds are to be formed; and a treaty has been entered into with the proprietor of the most extensive collection of living animals in the metropolis for its transfer there as soon as the necessary buildings have been completed. To this collection the members of the Society will have access as a matter of right.

Among the other objects of the Society, are the formation of a Zoological Museum, a Museum of Comparative Anatomy, and of a Library of Zoological Works; and the want of the last has perhaps proved a greater impediment than any other to the progress of the science in this country. It may be safely asserted that no approach to a complete collection of works on zoology exists in England; and hence we are frequently compelled to hesitate so long before we can safely assert a species to be undescribed, that foreigners step in and characterize it, while we are seeking in vain for information. We do not reflect on the zeal or the industry of the English zoologists; we know that there are among them those who, in spite of the obstacles hitherto opposed to their progress, are pursuing a steady silent course; who have already obtained a respectable, and some even an elevated rank in this department of science. We hope an opportunity will be afforded them of fairly representing, through this society, their claims to public respect and patronage.

It gives us great pleasure to see that a professorship of zoology and comparative anatomy is to be founded in the University of London, and we have heard that the finest collection in this metropolis, and certainly the best private museum in Europe, is already engaged for that noble institution. Now if the few who engaged in these pursuits, have acquired so much reputation notwithwithstanding the numerous obstacles with which they have been beset; how much more rapid will be their progress when assisted by all the help this society will be able to afford? If nothing is to be attempted for the sake of science, much benefit may accrue to our commerce, to our agriculture; and the luxuries of our already Heliogabalus-like dinner tables may be extended by the cultivation of zoology. The Thibet goat has been imported into France, where it has afforded an elegant material for the manufacture of the most beautiful shawls; this country has been benefited by the introduction of the Merino sheep, so well calculated, by the fineness and length of its wool, to increase the value of what was formerly regarded as our staple commodity. Other breeds of other animals might probably be beneficially mixed for the same purposes. In its original state, the sheep was only covered with a short down, hidden beneath coarse hairs. To

the farmer, equal prospects of advantage might be offered. It will be sufficient to mention only one of the numerous quadrupeds, the introduction of which into England might be made highly beneficial to his interests. The Purik sheep of Ladakh, first described by Mr. Moorcroft in his Transactions of the Royal Asiatic Society, is capable of procuring sufficient nourishment in places where the eye can scarcely detect the traces of vegetation; it may be domesticated, and like the dog may be taught to feed from the hands of its master, nibbling the bones which he has rejected. Surely the feeding of this docile and hardy creature on much of our barren and poorer lands, would be a more profitable speculation than the ruinous plan of extracting from impoverished ground a starving crop of grain.

To Europe we owe most of our races of cattle, our swans, our geese, and our ducks; to India we are indebted for the peacock and the best of our domestic fowls, namely, the Malay species; from Africa we received our guinea fowl, and from America, that ornament of the farm yard and the table, the turkey. In short every domestic animal, from which we derive the chief part of our food and clothing, was reclaimed by us from the wildness of nature, and owes its present improved condition to that knowledge of their habits and capacities which natural history has afforded.

It is to be hoped, however, that an institution so truly national, will ultimately receive the national support, and not always depend for its continuance on the unaided contribution of private individuals.

CHINESE METHOD OF EXAMINING MEDICAL CANDIDATES.

A Dutch physician who had resided 18 years in China and Japan, informs us, that so important is the process of acupuncture esteemed by the people, that the local authorities have the power of preventing any man from practising medicine, who does not exhibit the most complete acquaintance with the manner of using the golden needles; the parts of the body into which they may be thrust; to what depth; how long they are to be retained, and other minutiæ. They have adopted a method for the examination of the candidates, the most sure and satisfactory, to ascertain whether they be acquainted with their professed art or not; they give a puppet made of wood, about two feet in height, representing the human figure, to the candidate, and he is desired in the presence of some experienced old men, to mark out with the point of his needle on this wooden subject all the parts into which he thinks the needle may be safely thrust. If the examiners be satisfied with his skill, he then receives a license to practise, and a puppet which is called *Tsŏc bosi*, from *Tsŏc*, meaning a statue, and *bosi*, a priest; because the priests in these countries go with shaved heads, and the head of the statue is thus represented.

Now, if our examiners at Lincoln's Inn would give every candidate for their diploma a sharp examination upon a *Tsŏc-bosi*, not made of wood, but of other materials, (they might have the head of it shaved if they pleased,) they would do more to make men good surgeons, than all the little narrow-minded by-laws they have ever framed.

We hope the good example of the Chinese examiners will not be lost upon them.

HOSPITAL REPORTS.

GUY'S HOSPITAL.

CASE OF COMPOUND FRACTURE OF THE CRANIUM, WITH DEPRESSION OF BONE, WHICH TERMINATED FATALLY. USE OF HEY'S SAW, AND OF THE ELEVATOR.

R. B., a stout, muscular man of about 40 years of age, was brought to the Hospital about two o'clock on Saturday afternoon, Sept. 2nd, having received severe injury to the head. The accident had occurred at the Custom-house, by his falling to the ground from a scaffold about fifteen feet in height, and striking his head against the projecting point of a large stone. He was immediately taken up in a state of complete insensibility, but in a short time he rallied, and we learn from a gentleman who visited him half an hour after the accident, that he then found him sensible, but with a pulse not exceeding 40, and so small as scarcely to be distinguished, the surface of the body being at the same time cold. Indeed there was so much depression of the vital powers, that it was thought proper cautiously to administer brandy and water, which produced a slight amendment in the state of the pulse, and he was then conveyed to the Hospital.

When admitted he was able to walk, and he answered some questions, but there was some degree of confusion manifest in his replies, and he could give no account of the manner in which the accident happened. The pulse was about 60, the pupils somewhat dilated beyond the ordinary size, but obedient to the stimulus of light. The breathing was not stertorous, and the skin had become warm.

With respect to the local injury, this was found to be considerable. There was a transverse wound of the scalp of an inch and half in extent, over the occipital bone, on the left side of, and nearly in a line with, the tuberosity. The bone was denuded, and there was depression of bone to a great extent; a portion having been apparently driven downwards, and firmly wedged in under the lower sound portion of the occipital bone.

Notwithstanding (as it will be perceived by the description given above,) there were no symptoms present indicative of compression of the brain, yet Mr. Key judged it right to operate in order to elevate the depressed portion of bone. And thus acting upon the rule of practice laid down by Sir Astley Cooper—that in all cases of compound fracture with depression which is exposed to view, *whether symptoms of injured brain exist or not, it is proper to elevate the bone.**

Mr. Key therefore, having first enlarged the wound in the scalp by a longitudinal incision, by means of Hey's saw removed a portion of bone, and then by means of an elevator, proceeded to raise the depressed part. It was found in using this instrument that the inner table of the skull was much comminuted, and several pieces were removed. The object of elevating the broken and depressed portion to a level with the surrounding parts was attained, and the operation was completed by dressing the wound of the scalp. There was no change produced in the patient's symptoms, except that shortly after the operation he was sick.

At eleven o'clock in the same evening, the pulse was 78, and moderately firm. Four grains of calomel had been given, but the bowels were not acted upon Ordered pills, with extract of colocynth and calomel; the dose to be repeated every four hours, until the bowels were frequently and freely evacuated.

Sept. 3. Noon. Pulse 74, and compressible, pupils natural; there is a heaviness of expression in the patient's countenance, but he gives rational answers to questions. He was seen by the dresser at four o'clock this morning, when his pulse had much increased in force and frequency, and he also complains of pain in the left side. Blood was taken from the arm to the amount of twenty ounces, which materially diminished the pulse. He was sick about seven o'clock; the bowels have only been acted upon once.

Ordered, *blue pill, one scruple; extract of colocynth, two scruples;* to be formed into twelve pills. Two of these to be taken every six hours, with a saline purgative draught composed of salts and senna.

Evening. Pulse now of the same character as in the morning, but in the afternoon it amounted to 90, and had considerable harshness in its beat; the face was also flushed, and the skin hot. Mr. Key, who saw the patient under the foregoing

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* We beg to be understood as offering no opinion on this disputed point of practice, but merely as quoting the opinions of Sir A. Cooper, in order to illustrate the plan of treatment pursued in this case by Mr. Key. It is unnecessary to say the latter is an orthodox follower of the former.

circumstances, directed him to be again bled from the arm to the amount of fourteen ounces; this materially lessened the harshness of the pulse.

4. The patient obtained some sleep during the night, but during this he talked incoherently; the face is flushed this afternoon the tongue dry and furred; the skin hot, and the pulse about 90, with a considerable jerk in its beat. The bowels were freely moved yesterday evening, and once to-day; the evacuations were dark-coloured, and very offensive. Mr. Key directed *twenty ounces of blood* to be taken from the arm, and a quarter of a grain of tartar emetic to be given in a dose of saline effervescing mixture every three hours.

5. Two p.m. We learn from the dresser that the pulse was reduced in volume by the venesection, combined with the exhibition of the tartar emetic. The pulse this morning is quick and vibrating, the tongue is furred and dry, the pupils dilated, but obedient to light; the skin hot and dry. There is a vacancy of expression in his countenance, having an unmeaning stare; if desired to put out his tongue, he complies with the request, but retains it out for some time after being repeatedly desired to withdraw it. A poultice has been applied to the wound since yesterday, it has an unhealthy appearance, and but little or no discharge from it.

Mr. Key directed three grains of calomel to be given at 12 o'clock, and a blister to be applied to the nape of the neck. At two p.m. he directed

Sulphate of magnesia, 3 *drachms*,
Manna, 2 *drachms*,
Infusion of senna, 1½ *ounce*; to be taken every two hours.

6. The poor man sunk about two o'clock this morning; he became worse on the preceding evening, and some ammonia was in consequence exhibited; the pulse, however, gradually became more feeble and the respiration more laboured, until death ended his sufferings.

Post Mortem Examination.

Care was taken in removing the skull-cap, that it should be sawn through so low down, as to include the injured portion. The calvaria having been therefore removed, and divested of its coverings, an opportunity was afforded of observing the precise extent of the fracture. It was seen that a portion of the os occipitis was detached from the remainder, the part thus separated being of a triangular shape, and having its base placed downwards. The broad part or base of this detached portion, was, or rather had been, (previous to the use of the elevator,) much depressed, and also driven under the sound contiguous part of the occipital bone. The violence with which the broken bone had been forced under, had occasioned a separation of the inner table of the surrounding bone, and hence at that part adjoining the base of the triangle was found a considerable projection of the inner table. The small piece of bone removed by Hey's saw, it will be observed, was the apex of the triangular broken portion, which was elevated above the level of the surrounding parts in proportion to the depression of its inferior part.

The depression of the inner table was so considerable, that it must evidently have acted as a source of irritation to the dura mater, although not producing an symptoms of compression of the brai The dura mater, situated immediately be neath the fracture, was covered with a layer of coagulable lymph, firm and dark coloured, so as to give the appearance of a slough, and there was increased vascularity of this membrane. The vessels of the pia mater were turgid; but the inner portions of the brain did not manifest any morbid appearances.

ST. THOMAS'S HOSPITAL.

CASE OF STRICTURE OF THE RECTUM.

Charge of inattention preferred by the Patient against the Dresser.

Rebecca Gordon, ætat. 25, pale and unhealthy in appearance, was admitted into the Hospital on the 11th of May, under the care of Mr. J. H. Green. She stated that she had been ill five years, and that during the greater part of the time she had experienced much difficulty and pain in voiding her fæces. This complaint existed upwards of two years before she sought any medical assistance, but finding the disease daily increasing she went into the London Hospital under the care of Mr. Headington, where she remained about six weeks. During the time she was in the Hospital a stricture of the rectum (as she was informed) was divided, but she obtained little or no relief from the treatment pursued. Since she left the London Hospital to the period of her admission into St. Thomas's, many different plans of treatment have been

adopted, but without being productive of any benefit.

She complained of the following symptoms:—A violent straining, or forcing, when about to pass a stool, accompanied with great pain in the back and lower part of the body. Such was the extreme difficulty and exertion in the excretion of the fæces that, she observed, the efforts completely exhausted her strength. The fæces were passed in flattened and very small portions; she had occasional pain in the pit of the stomach, and vomiting of a sour fluid, with eructations, heart-burn, and depraved appetite; there appeared to be in fact great and general disturbance of the functions of the alimentary canal, consequent upon the obstruction in the rectum. She said, that when violently straining, before the appearance of a motion, there was a thin, bloody discharge, but none at other times.

The patient was seen by Mr. Green on the second day after her admission, who examined the rectum, and reported her to have stricture of the rectum, situated about two inches up the gut.—There was considerable thickening and induration at the point of obstruction, and the cavity of the bowel was rendered so narrow as barely to admit the top of the finger.

Mr. Green directed *a bougie of moderate size to be introduced every second day, by the dresser.*

Sulphate of magnesia, two drachms;
Carbonate of ditto, one scruple:
to be taken every morning in mint water.

June 4th. We find her complaining of great pain about the sacrum, extending down the back part of the thighs. The stools still evacuated with great difficulty, and having the same pellet-like appearance. *The bougie has only been introduced once since her admission*; having been informed that she would derive benefit from its constant use, she expressed much regret at the inattention of the dresser.—Ordered to apply twelve leeches to the sacrum, and to continue taking the saline aperient.

20. The patient has obtained no relief. She was directed on the 10th to use the following injection every night:

Powder of opium, twelve grains;
Lime water, four ounces. Mix.

The bougie introduced about once a fortnight? Complaint made to Mr. Green of the dresser's negligence.

July 14. The difficulty and pain of excretion continues unrelieved; the derangement of the alimentary canal has increased; she complains now of frequent sickness, with pain at the pit of the stomach; the colon appears to be much distended. She was directed on the 12th to apply twelve leeches to the epigastric region, and to-day Mr. Green directed the same number to be applied, with the following medicine:

Calumba powder, ten grains;
Carbonate of soda, ten grains;
to be taken three times a day.

Notwithstanding the repeated remonstrances and entreaties of the patient, the dresser still neglects to pass the bougie oftener than once in the space of ten days or a fortnight.

The poor girl, soon after the date of the last report, left the Hospital much dissatisfied, and having mentioned to her friends the circumstance of the dresser's gross inattention, they very properly preferred a complaint against this individual before the Steward of the Hospital. The affair, we believe, underwent a kind of investigation, but we did not hear of any measures being taken to prevent the recurrence of such disgraceful charges.

It is high time something was done to wipe away this stigma on our Hospitals—the negligence and incompetence of the dressers; and as the local authorities do not seem inclined to remedy the evil, we shall be driven to the alternative of furnishing the names of the culprits, and thus hold them up to the scorn and contempt of the public.

The young woman whose case we have related above, was in the Hospital upwards of two months, suffering under a disease which certainly admitted of much relief, if not absolute removal, by a steady perseverance in the plan of treatment prescribed. Now as Mr. Green directed this treatment—of course under the impression that it would be beneficial—it was his bounden duty to see that the measures were complied with, and failing to do so he is equally culpable with his dresser.

RUPTURE OF THE URETHRA, OCCASIONED BY A VIOLENT BLOW IN THE PERINEUM.

R. Sawyer, ætat. 41, a healthy looking muscular man, came to the Hospital on Thursday evening, August 10th, about five o'clock. He stated that he fell across the side of a boat on Tuesday morning, and falling with his legs asunder, he received a violent blow in the perineum from the edge of the boat. Considerable swelling immediately ensued at this part, but he had not much pain until two or

three hours after the accident; he had made water a few hours previously.

On the following morning he felt a desire to void his urine, and in attempting to do so, a few drops of blood only flowed from the orifice of the urethra. He applied to a surgeon, who ordered leeches to the perineum, and poultices, and in the evening attempted to pass a catheter, when about half a pint of blood came away, and the man was tolerably easy throughout the night. Leeches were renewed on the next day, but as the bladder was now much distended and painful, the patient sought relief at the Hospital, and he was immediately admitted into Williams's Ward.

The dresser of the week attempted to pass a catheter, but finding this impracticable, a messenger was dispatched for Mr. Green, who shortly after arrived.

The integuments of the perineum, scrotum, and under part of the nates, were completely of a dark blue colour, owing to blood being extravasated in the cellular substance, and the parts, more especially the perineum, had the peculiar feel of ecchymosis. The bladder was much distended, rising high in the umbilical region, and was painful on pressure.

Having first attempted for a short time to pass the catheter, Mr. Green next proceeded to make an incision in the perineum in the course of the raphe, upwards of an inch in length, and having removed the clotted blood from the part, he passed a catheter down the urethra, the point of which made its appearance in the perineum at a short distance below the bulb. It was now apparent that the urethra had been torn through, and the next object therefore was to discover the lower opening. The parts were, however, so much obscured by the extravasated blood (large clots of which were removed), that a considerable space of time elapsed in finding the orifice. The point of the catheter was at length introduced into it, and was then carried on without difficulty to the bladder. A large quantity of high-coloured urine was drawn off, which gave much relief to the patient. The silver catheter was retained in the bladder.

It appears that it was the fore part of the membranous portion of the urethra which was torn through, the laceration also extending to the bulb. It was curious that no extravasation of urine had taken place under these circumstances.

11. The patient has passed a comfortable night, the tongue is somewhat furred, and he complains of thirst; the bowels are open; pulse about 70, full, soft and regular. The scrotum and nates still continue much discoloured from ecchymosis; a considerable quantity of bloody urine has been drawn off.

12. In every respect going on well; the catheter kept in the bladder.

21. We have visited this case daily since the last report, but nothing material has occurred. The patient has not had a single untoward symptom. The catheter was removed for the first time yesterday, and again introduced without difficulty. The wound is healing, but not rapidly.

Sept. 4. Report equally favourable. The wound has not quite closed; being the mate of a ship about to sail in a few days, he is, however, anxious to leave the Hospital. The catheter is still kept in the bladder.

He left the Hospital two days after the last report.

This is the second case of rupture of the urethra, from a blow in the perineum, which has been in the Hospital within the last two months.

ST. BARTHOLOMEW'S HOSPITAL.

CASE OF ARTHRITIC IRITIS.

Maria B——, the subject of this complaint, is a middle aged woman, about 40, and of sallow complexion.

She states that she has been afflicted with rheumatism for nearly a year and half, and at present she complains of pain in her limbs generally.

It is about two weeks since her left eye became painful. Her right eye is free from the disease, and previous to this attack her sight was strong and perfect.

On examining the organ a halo, or zone, is observed around the cornea, not of a bright red, as in common iritis, but of a dull and somewhat livid colour; the vessels composing it terminate short of the cornea, so that there is a narrow white boundary interposed between the halo and the cornea. The iris is altered in appearance, but there is no effusion of lymph. The white edge is partial, being observed more especially towards the lymph; the iris acts by the stimulus of light, and the pupil retains its central position and circular form.

The pain in the organ has never been very considerable until within the last few days; the patient described it rather as an uneasy sensation at first than as a severe pain; latterly, however, it has increased, and she now complains of a piercing and lancinating pain in the parts around the eye, and on the affected side of the head.

At the time of her admission, which was on the 12th of June, Mr. Lawrence observed, that he never saw a better marked case of arthritic iritis; the diagnostic symptoms being so particularly distinct. Bowels rather confined; tongue moist; pulse natural. *Ordered to be cupped on the left temple to ten or twelve ounces, and to take a dose of calomel and jalap immediately, with five grains of Plummer's pill every night.*

16. The eye appears less inflamed, and on the whole she is better; the pains in the limbs still trouble her a good deal. Ordered to take the following draught every night, with the Plummer's pill:

Sulphate of magnesia, three drachms;
Magnesia, half a drachm;
Colchicum wine, one drachm;
Mint water and distilled water, of each six drachms.

A blister to be applied to the back of the neck.

20. The eye is considerably improved in appearance; the livid zone has almost entirely disappeared, and the iris begins to assume its natural colour. Continue as before.

24. The bowels are kept gently open by the draught. The eye is almost of its natural appearance, and all pain in it has ceased. She complains of the pain in the limbs as being still severe, especially towards night.

26. Iritis quite cured, and vision perfectly restored. Let the draught be taken each alternate night. She continued in the Hospital a few days longer on account of the rheumatic pains in her limbs, which were greatly relieved, and she was then discharged.

CASE OF INJURY TO THE RIGHT HAND, WITH AMPUTATION OF THREE FINGERS, BY A HOUSE SURGEON.

James Medlam, a stout muscular man, came into the Accident Ward about the middle of the day of the 10th of June, on account of an injury which he had just before met with whilst at work. It appeared from his statement, that while turning the wheel of a crane, by some means his hand was entangled in the machinery. The integuments of the three middle fingers were considerably lacerated, the first phalanges were torn off, and the second exposed. The House Surgeon came to the accident; after cleaning the hand of a great deal of filth and oils which covered it, he proceeded to make two semicircular flaps on each side of the second phalanx of the middle finger, and with a metacarpal saw, removed about a third of the bone; after this was done, he discovered that *he had not removed enough to allow the flaps to fold over by full half an inch, so that it was necessary, by means of a bone forceps, to break off this portion.* In the two other fingers the integument was less lacerated, and there was sufficient to cover the stumps when the third phalanges were removed at the joints.

The man suffered the whole time most excruciating pain. He has been freely purged, and has gone on without any unfavourable symptoms, except on the 12th, when he became a little feverish. Saline medicine, with antimony, and free purging, however, soon subdued this, and the wounds are now almost healed. He has since left the Hospital.

WESTMINSTER HOSPITAL.

CASE OF PENETRATING WOUND OF THE ABDOMEN, WITH PROTRUSION OF THE OMENTUM, SUCCESSFULLY TREATED.

A boy about seventeen years of age, was brought into the hospital, in consequence of having received a wound in the abdomen, about three quarters of an inch above the umbilicus. This was done by the mother with a large table knife, which in a fit of drunkenness and passion she thrust into the paunch of her refractory offspring.

The wound was about an inch in length, and transverse:—a portion of omentum about the size of a horse-bean protruded. This was returned by the house surgeon, and a compress of lint was placed over the wound. On the following morning the boy complained of pain in the neighbourhood of the part, and on removing the compress, it was found that the omentum had been again forced through. This was allowed to remain until the arival of Mr. Guthrie, and some leeches were ordered to be applied in the interim, by the house surgeon. Mr. Guthrie enlarged the wound in the same direction, to almost twice its first extent, and then returned the omentum. (We should like to inquire here, en passant, why this was done?) The omentum was easily returned through the same opening, and when Mr. G. saw the case, the omentum was not strangulated: it might have been returned if moderate pressure had been applied. The edges of the wound were brought together with straps of adhesive plaster, and over these a compress was again laid, and more effectually secured than before.

The boy took some aperient medicine frequently, and the wound united in a

very favourable manner; and at his own request, he left the hospital on the 6th, about three days after his admission, with the wound almost healed. He has been since at the surgery several times, and is now (12th) quite well.

CASE OF TRAUMATIC TETANUS.

A man about thirty-five years of age, was admitted on the 21st of August last, having received a severe injury on the left leg and foot, from the passing of a wheel of a wagon over it. The ancle and the lower part of the leg were very much bruised, but no bones were broken. Two small wounds were made, which were dressed with simple ointment, and afterwards a cold lotion was applied. The case went on favourably until the 23d, when he began to complain of some uneasiness in the leg, and also of some stiffness about the neck, which immediately excited the alarm of the surgeons. On the evening of that day he was ordered to take gt. xxx. of the tincture of opium, at night.

On the 23d he felt exceedingly low and weak, but the pain was less than on the preceding day. He was ordered to take a mixture composed of

Infus. of cascarilla, ʒvj.
Tinct. of cascarilla, ʒvj.
Aromatic confection, ʒij.

This mixture was ordered to be taken four times in the twenty-four hours, and he appeared to be much better. He went on thus favourably until the 31st, when, without complaining of pain in the leg, stiffness of the muscles of the neck, and an uneasiness in the throat again commenced. Mr. Lynn, junior, who had the management of the patient, ordered a grain of opium to be given to him every two hours, with a pint of wine per diem.

Sep. 1. No improvement in the symptoms; the opium and wine continued. Glysters containing oil of turpentine were injected. On the following day the same mode of treatment, and the same state.

3. The spasms have increased in force; the abdominal muscles are rigidly contracted; the respiration is impeded by the convulsive actions of the diaphragm; great pain and weight at the pit of the stomach. Swallowing was accomplished with difficulty, with great pain in the neck.

4. The symptoms continuing without amendment, he was ordered a grain of opium, to be taken with three drachms of the spirit of nutmegs in a draught, every three hours.

On the 5th he was nothing benefited by the medicine; on the following day he could not swallow. Two large opiate plasters were laid on the abdomen. An enema was administered, containing turpentine and soft soap. On the 6th, the symptoms became worse, and toward evening he died. No examination was made, as the friends almost immediately removed the body.

It is a lamentable fact, that the pathology of this disease, which terminates so often fatally, remains as yet unknown. All the modes of treatment recommended by different practitioners have been unsuccessful; and until investigation or chance shall develop the right method, we must stumble on in the path of unsatisfactory empiricism. Baron Larrey, who has seen more of this disease than any other man, has virtually confessed the inefficiency of his proposed plans by their number, to say nothing of their results. It appears a very summary mode of procedure to lop off a man's limb; few surgeons would like to take the responsibility of such a measure, as there are numerous cases of spontaneous recovery on record; yet this appears to be the amount of Larrey's advice. Sir Astley Cooper, Sir James Macgregor, Mr. Guthrie, and most of our men of experience, appear opposed to amputation, as well as to scarifying the contused parts. It is difficult to understand how an additional irritation of this sort can be beneficial. Mr. Lynn might have carried his doses of opium further, although we are by no means sanguine as to the results of the sedative plan of treatment. Mr. Abernethy relates a case in which, after the death of a patient who had been treated largely with opium, thirty drachms of that substance were found very little changed in the stomach.

CASE OF COMPOUND FRACTURE OF THE CARPAL AND METACARPAL BONES OF THE RIGHT HAND.

A man employed in unloading some vessels in the river, had his hand severely shattered, by having it caught between a box of goods and the edge of the lighter in which it was to be put. Two wounds were inflicted, the one just over the inner side of the unciform bone, and another about three-fourths of an inch lower down in the same line. Two pieces of bone protruded, one from each opening, which were removed by Mr. Guthrie, and the integuments being accurately brought together, were secured with adhesive plaster. A light bandage was afterwards applied, wetted with an evaporating lotion, and the case is going on well.